NEW EQUIPMENT DIGEST

A Penton Publication

April, 1960

Volume 25 — Number 4

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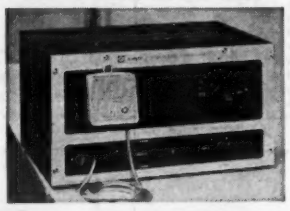
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 112

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

CITIZENS BAND RADIO
5-w unit transmits 20 miles



Two-way communications over a 20-mile range is possible with the Knight Kit Model C-11 citizens band transceiver kit which consists of a super-regenerative receiver and 5-w transmitter in a single unit. For either stationary or mobile applications, such as on cars or boats, kit is supplied with one crystal selected for any one of 23 frequency channels, a microphone, all parts, wire, and solder. Stationary unit operates from 105-125 v ac. Accessory mobile power supply for 6-12-v operation is optional, as is a vertical antenna. Kit lists for $39.95. • **Allied Radio Corp.**, 100 N. Western Ave., Chicago 80, Ill.

▲ For more details circle **NED-1 D** on enclosed inquiry slip ▲

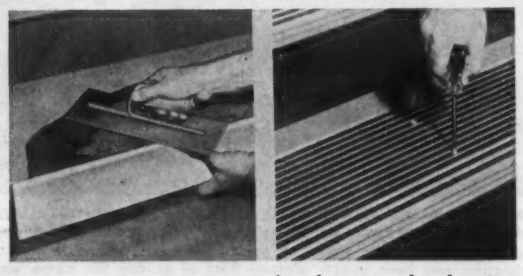
THREAD SEALER
antiseize type withstands 1800° F

Improved Fel - Pro C5-A antiseize thread compound lubricates and seals bolts, studs, and flanges at high pressures and temperatures to 1800° F. The nonsettling, nonhardening, homogenized composition is usable in below freezing weather and prevents rust and corrosion. Usable on all metals, their alloys, and plastics, compound can also be used to lubricate lathe and machine tool ways. It is available in tubes and cans. Free test sample is available by writing direct to company. • **Felt Products Mfg. Co.**, 7450 N. McCormick Blvd., Skokie, Ill.

▲ For more details circle **NED-2 D** on enclosed inquiry slip ▲

ALUMINUM STAIR TREAD
offered in lengths to 12 ft

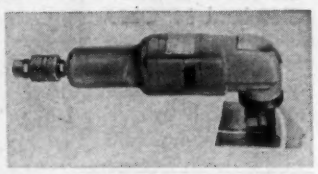
Worn steps can be restored and slippery stairs made safe by installation of Super Stairmaster aluminum safety tread. A plastic mix leveling compound is trowel-



eled over worn areas to make the steps level prior to capping with the tread. Made with a tapered back and fitting all steps up to 13 in. wide, the tread has long-life abrasive ribs which prevent slipping. Lengths to 12 ft are offered complete with fasteners. • **Wooster Products Inc.**, M-R Div., 1000 Spruce St., Wooster, Ohio.

▲ For more details circle **NED-3 D** on enclosed inquiry slip ▲

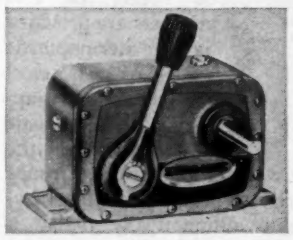
PNEUMATIC NIBBLER
cuts up to 13-gage stainless steel



Distortion or curling cannot occur when cutting sheet metal with this lightweight, compact air - powered nibbler. Capacity is up to 13-gage stainless steel. This model augments a line for cutting sheet metal, wire, and corrugated products. • **Modern Mfg. Co.**, 680 Davisville Rd., Willow Grove, Pa.

▲ For more details circle **NED-4 D** on enclosed inquiry slip ▲

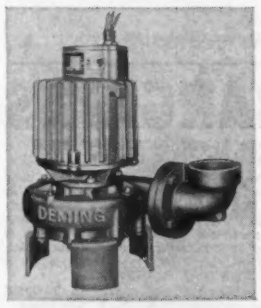
VARIABLE SPEED DRIVES
now have overload protection



Redesigned 400 Series variable speed drives now incorporate built-in overload protection and a fast, precise speed setting control. Drives give infinite speed control and have an output range from 0 to 1200 rpm with 1800 rpm input. Torque is constant from 3 to 450 lb-in. Lever, screw, vernier, or remote controls are available. Line comprises over 250 models and types, all of which are available with or without motors from 1/8 to 3/4 hp and with or without reverse or gearhead. • **Zero-Max Co.**, 1900 Lyndale Ave. S., Minneapolis 5, Minn.

▲ For more details circle **NED-5 D** on enclosed inquiry slip ▲

SUBMERSIBLE SEWAGE PUMP
for temporary or permanent use



Semiopen impeller with precision bore for perfect alignment and self-cleaning action on the suction head face are features of the Demersible sewage pump. Pump and motor are combined in one compact unit. Motor is sealed and oil filled in a cast iron case. Submersible unit for temporary or permanent service has controls located where convenient. Thirty feet of waterproof cable are furnished. Pump and motor shafts are stainless steel, heavy duty ball thrust bearings are self-lubricated, and base and strainer are cast iron. Float or electrode controls are available in the 25 to 800-gpm pumps. • **Deming Co.**, Salem, Ohio.

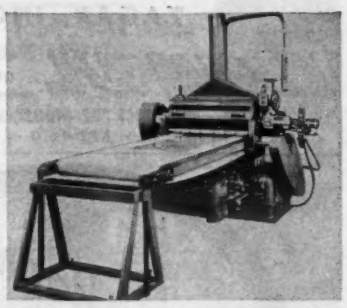
▲ For more details circle **NED-6 D** on enclosed inquiry slip ▲

AIR CYLINDERS
stainless units have double end rods

Stroke lengths through 18 in. are offered in double end rod type, double-acting air cylinders. Made with mirror finish stainless steel bodies and ground and polished stainless steel rods, they also feature U-cup piston and piston rod seals for long life. Bore is 1 1/16 in. • **Bimba Mfg. Co.**, 101 Main St., Monee, Ill.

▲ For more details circle **NED-7 D** on enclosed inquiry slip ▲

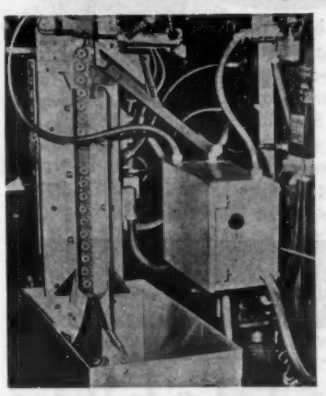
SURFACE FINISHING MACHINE
for various metals, steel, wood



Flexible pinch - roll feed of the Model 309 surface finishing machine will handle material up to 2 in. thick at an infinitely variable linear rate of feed. The one - pass, through-feed machine processes various types of materials, including metals, plastics, and wood. It cleans sheet materials, and can impart a fine-grit scratch pattern to insure adhesion of protective or decorative coatings. Machine accommodates different types of interchangeable back-up rolls, automatic liquid compound applicators, and synchronized power take-offs to drive conveyors. It is offered with 27 optional features or modifications. • **Clair Mfg. Co.**, 1002 S. Union St., Olean, N. Y.

▲ For more details circle **NED-8 D** on enclosed inquiry slip ▲

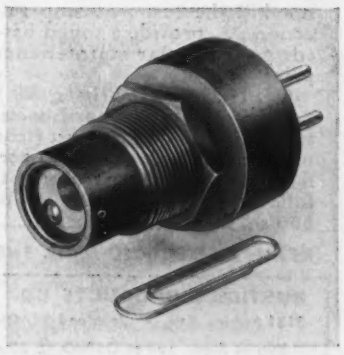
RIVETING MACHINE LOADER
automates can production unit



Bail-holding ears to be riveted on paint and other types of cans are oriented, loaded, and located by this hopper type bin unit which automates the riveting machine. Ears are held by adjustable magnetic force on an impregnated canvas belt which rises from the bin. After riveting both sides of the ear, can is turned 180 degrees and automatically positioned for affixing the second ear. Machine handles up to 700 cans per hour. • **Michigan Tool Co.**, Gear-O-Mation Div., 7171 E. McNichols Rd., Detroit 12, Mich.

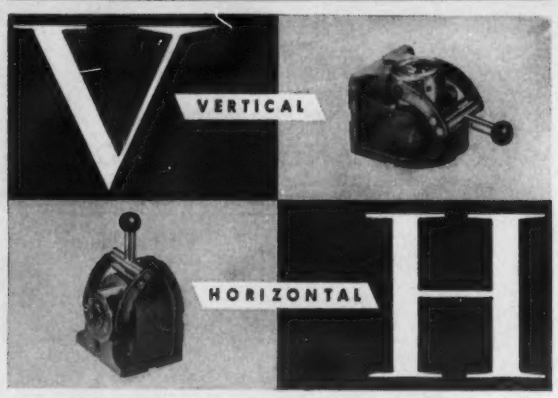
▲ For more details circle **NED-9 D** on enclosed inquiry slip ▲

PHOTOELECTRIC SCANNER
combines light source and photocell



Energy source and detector are combined in the single 2 1/4-in. long by 1 1/8-in. diameter Type SA-IR infrared photoelectric scanner or proximity sensor. It will sense metallic objects or control-areas at up to 2-in. distances. Infrared source has a 60,000-hr life when operated on 5 v ac. Solid-state detector is sealed for protection against moisture, dust, or corrosive atmospheres. Effects of ambient light are minimized by an infrared filter. Unit mounts in a single 3/4-in. hole and has a standard four-prong base for plug-in connection to control circuit. • **Farmer Electric Products Co.**, 2300 Washington St., Newton Lower Falls, Mass.

▲ For more details circle **NED-10 D** on enclosed inquiry slip ▲



Another Model Holding Fixture by ZAGAR

Simplified tooling at reduced cost keynotes Zagar fixtures for drilling, grinding, milling and other finishing operations. The Zagar V-H will:

- SET UP QUICK
- LOAD EASILY
- ELIMINATE NEED OF ANGLE PLATE

Get more information in Reference Sheet 14-N-4.

ZAGAR, INCORPORATED

Zagar 23880 LAKELAND BLVD. CLEVELAND 23, OHIO

TOOLS FOR INDUSTRY and SPECIAL MACHINERY

For more details circle NED-11 D on enclosed inquiry slip

A Market Place for Inventions

Ideas, inventions, and new products developed to serve specific needs will go on the auction block at a forthcoming week-long conference and exhibition. Labeled the "National Inventions Exhibit and Creativity Conference," its purpose is to bring inventors and researchers together with investors and industrialists on an open, ethical plane. Here's an opportunity for companies seeking new products or a chance to diversify.

More than 150 inventors of patented or patentable products will exhibit models, most of which will be available for sale, lease, or development. Each of these inventions will be prejudged by a selection committee to be sure they serve a need and are practical.

The five day "Ideas and Profits" conference will deal with the field of need, creativity, research, and development. Stressed will be what to do with an idea, protecting it, and marketing it. Sponsored by the Cleveland Engineering Society, this program and exhibit will be held June 20 to 24 in the new Cleveland Engineering and Scientific Center. If you are searching for a new idea or product, or if you want to know how to develop your own ideas, write to: Cleveland Engineering Society, 3100 Chester Ave., Cleveland 14, Ohio.

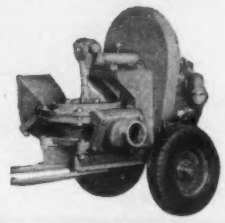
A. N. Gregg
EDITOR

For Complete Range of Performance . . . Insist on

HALE Industrial Pumps

No matter what your water moving problem may be, NOW there's a Hale pump to handle it at the lowest possible cost!

"TORRENT" Line Centrifugal, Self-Priming Pumps 4 Models from 1½" up to 3"—Skid or wheel mounted.



The Diaphragm Line For trouble-free pumping of high-solid-content water 4 Models from 1½" up to 4".

FREE . . . Handy Pump Selector File
Detailed information and illustrations on how to pick the right Hale Pump for the right job, at your finger tips.

Dealer Inquiries Invited—Exclusive Territories Open. Write today to:

HALE FIRE PUMP CO.
CONSHOHOCKEN, PA.

For more details circle NED-17 D on enclosed inquiry slip

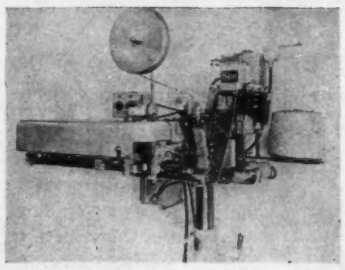
Neat, sanitary assemblies designed for Food-Beverage services, or other anti-corrosion, anti-contamination uses—long life, easy operating. Stainless steel with either solid stainless door or LASTIGLAS coated steel door. Swing-in type or swing-in/swing-out in sizes 13" x 18", 15" x 20". Immediate Delivery. Ask for Bulletin M-60.

Also sanitary, pressure-type Sighthole assemblies, 10" x 14".

BISHOPRIC PRODUCTS COMPANY
4413 Este Avenue, Cincinnati 32, Ohio
TANKS / LININGS / DESIGNERS / FABRICATORS

For more details circle NED-12 D on enclosed inquiry slip

BAG CLOSING MACHINE applies thermoplastic tape closure



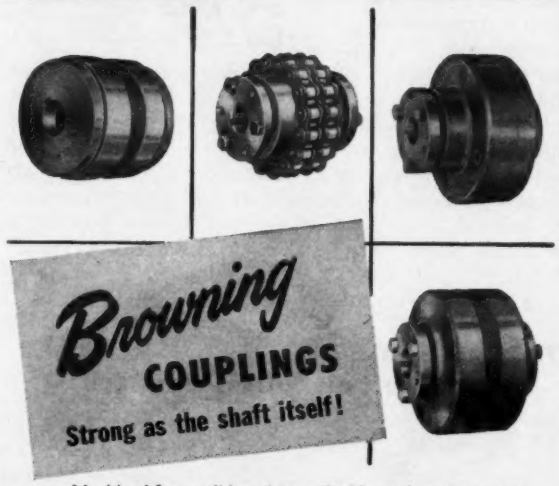
Maximum protection against contamination from outside particles and elimination of sifting of fine products are provided by the thermoplastic Tape-Top bag closing machine. It applies a thermoplastic tape closure over the sewing on open-mouth multiwall shipping sacks. Closure also creates a moisture barrier to prevent caking of hygroscopic products. Machine automatically makes a standard sewn closure, then heat seals the tape under controlled temperature and pressure. • **Bemis Bro. Bag Co.**, 408 Pine St., St. Louis 2, Mo.

For more details circle NED-14 D on enclosed inquiry slip

Reduction Drives

Black Tool, Inc.—Cycloid type reduction drives provide torques ranging from about 30-lb-in. per pound of reducer weight to over 80 lb-in. per pound. These compact, space-saving units have coaxial driver and driven shafts, allowing simultaneous take-off of different ratios. They are subject of descriptive 8-page brochure.

For more details circle NED-15 D on enclosed inquiry slip



Machined from solid steel or malleable castings, Browning couplings offer compact design and maximum strength. Here you'll find a wide range of flexible, rigid and chain couplings employing Browning's malleable split taper bushing; also fixed bore in the smaller sizes, and a new line of minimum bore chain couplings. It's easy to choose the coupling best suited for each job, when you examine the complete Browning line.

Ask Browning Distributor or write for Catalog V169

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

For more details circle NED-18 D on enclosed inquiry slip

We'll Cancel the Invoice

if OSPHO® Doesn't Do What We Say

Order 5 gallons of OSPHO. Try it on any rusted metal. We'll cancel the invoice if OSPHO does not kill the rust . . . stop rust action . . . provide a sound base for your regular maintenance paint.

OSPHO is *not* a primer, *not* a paint. It is a phosphoric metal treatment that changes rust (iron oxide) to iron phosphate—a perfect surface for paint coat that follows. A gallon treats up to 600 sq. ft.

Brush or spray OSPHO right on rusted metal.

READ, FILL-IN AND MAIL THE COUPON

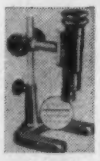
RUSTICIDE PRODUCTS CO.
3131 Perkins Ave. • Cleveland 14, Ohio

Ship us 5-gal. pail of OSPHO @ $3.40 per gal. (F.O.B. Cleveland). If it does not do what you claim, we'll notify you within 30 days of receipt. You will cancel the invoice.

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-13 D on enclosed inquiry slip

UNUSUAL BARGAINS



ERECT IMAGE LOW POWER MICROSCOPE WITH DIRECT READING SCALE RETICLE

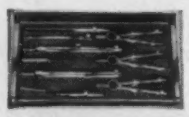
Worth $80 to $100—but use of American-made war surplus optics results in unusual bargain. Reticle has scale .4" long with .005" gradations for 10 power use; and scale .2" long with .0025" gradations for 20 power use. Unlimited applications for direct measuring. Image is erect and correct right to left, optics are color corrected, ample eye relief. Microscope is 6" long, base 4½" x 4½"—can be raised from 8½" to 13".
Stock No. 70,266-AE ..... **$29.95 Postpaid**

Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

NEW! CIRCULAR SLIDE RULE: Pocket Size—Fast—Easy to Use!

Be a Math Whiz! New Circular Slide Rule multiplies, divides, figures fractions, percentages, squares, cubes, roots, proportions, circumferences, areas, retail prices, fuel consumption. Eliminates the confusions of ordinary slide-rules. Priced far lower. Faster, easier to learn and use. Constructed of 2 aluminum discs with plastic indicator. 3½" diameter. Directions included.
Stock No. 30,336-AE ..... $4.95 Postpaid

Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee



CLOSE OUT! MECHANICAL DRAWING SET

Regular Price $18.00, Our Price Only $8.00 Ppd. American manufacturer couldn't compete with foreign imports—thus you get a terrific bargain, even far below import prices. 10 handsome pieces in velvet-lined case. Nickel plated brass — precision American-made. We guarantee you'll be satisfied or money refunded.
Stock No. 50,200-AE ..... **$8.00 Ppd.**

Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

FREE! Giant CATALOG of OPTICAL BUYS!

OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 128 pages — hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists, math learning aids. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., Barrington, N. J.

For more details circle NED-16 D on enclosed inquiry slip

the new stronger grating is

TRU-WELD

(Above) This DRAVO TRU-WELD GRATING was deliberately bent, placing far more strain on the welds than there would be in normal service. Not a single weld has parted. This grating will withstand vibration and hard usage. (Below) Bent in exactly the same way, this grating came apart at the welds. The fusion of bearing bar to cross bar achieved by the Dravo method of manufacture prevents this from happening to Tru-Weld Grating. For more information on this new, stronger grating—call your Dravo representative, or write DRAVO CORPORATION, Pittsburgh 25, Pa.

DRAVO CORPORATION

For more details circle NED-19 D on enclosed inquiry slip

ALL AMERICAN TESTERS
SPOT VIBRATION WEAK SPOTS BEFORE COSTLY FAILURE!

Model 10 HA-T
Horizontal Vibration, 5-100 C.P.S.

• How much vibration will your product take? Where are the danger areas? All American Vibration Fatigue Testers answer these questions in your shop or laboratory with shake-down tests that simulate field service vibrations. Engineering gets the facts needed to improve design at lowest cost. Equally effective in spot-checking production runs.

• All American Testers meet U.S. Government specifications for horizontal or vertical vibration testing of all sizes and shapes of units weighing up to 150 lbs. Range Selector automatically controls acceleration and deceleration, or holds vibration frequency at any desired point between 5 and 100 cycles per second.

CATALOG "F"
gives full facts on all 10 All American Testers, proved in long service to government and industry.
Write for your free copy now.

ALL AMERICAN TOOL & MFG. CO.
Builders of ALL AMERICAN Precision Die Filing Machines
8044 Lawndale Avenue • Skokie, Illinois

For more details circle NED-20 D on enclosed inquiry slip

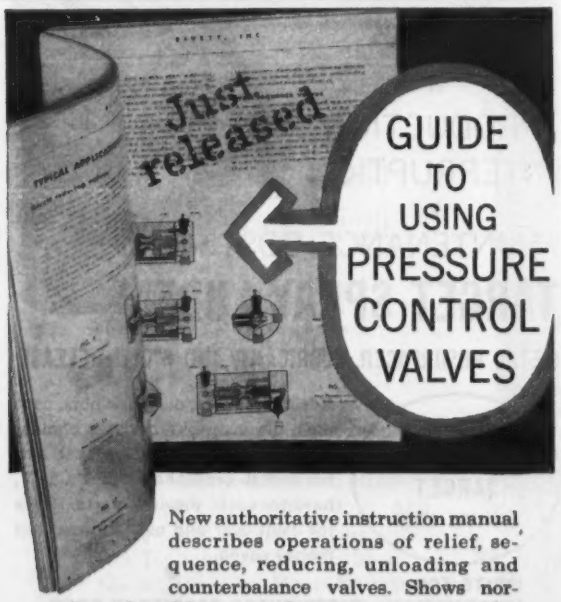
Rubber or Plastic Parts Produced by the Hundreds or by the Millions

WE MATCH YOUR SPECS AND YOUR PRODUCTION SCHEDULES

WE CAN produce in quantity any part made of molded solid rubber (illustrated) or of extruded flexible vinyl plastic. We have complete engineering and technical personnel for working with you on developing the design or redesigning a part, plus a long and successful performance record on quality and deliveries to schedule. Send drawing, sketch or part for prompt quote.

REPUBLIC RUBBER DIVISION
LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1, OHIO
INDUSTRIAL RUBBER PRODUCTS

For more details circle NED-21 D on enclosed inquiry slip



New authoritative instruction manual describes operations of relief, sequence, reducing, unloading and counterbalance valves. Shows normal spool position, operating pressure source, pilot or direct operation; flow diagrams, pressure vs. flow curves, ratings, dimensions.

RIVETT, INCORPORATED, DEPT. NED-4
Brighton 35, Boston, Mass.

RIVETT *For free copy of Catalog 230, write on company letterhead.*

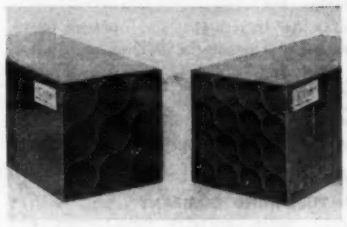
For more details circle NED-22 D on enclosed inquiry slip

WIRE CLIP APPLICATOR
air-powered tool is magazine-fed

Two wires are clipped together in less than 1 sec with the Paslode Clipper, a portable metal clip applicator. Easily loaded by a cartridge, metal clips are magazine-fed by the 5¾-lb air-driven tool. Minimum of 50 clips is held by Model S-1, designed to join 7 to 11-gage wires. Model B-1 holds 75 clips for joining 11 to 13-gage wires. Clips are ¾ in. wide and 0.042 and 0.023 in. thick. Tool operates on 70 to 75 psi. Sketch shows fastening of springs to a wire frame. • **Paslode Co.**, 5860 Northwest Highway, Chicago 31, Ill.

For more details circle NED-23 D on enclosed inquiry slip

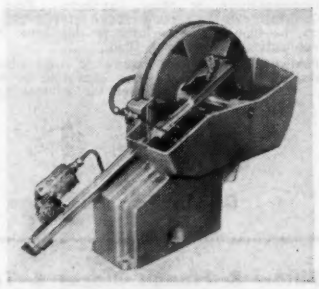
DRAWING FILES
9 and 16-tube models



Lengths of 30, 36, and 42 in. are available in Multiroll drawing files. Two models have nine 4⅛-in. diameter individual tubes or sixteen 3⅛-in. diameter tubes. Tubes are encased in a strong, reinforced corrugated board container. Visual index form is furnished with each unit, finished in gray plastic-base enamel. • **Roll & File Systems, Inc.**, Box 3863, Detroit 5, Mich.

For more details circle NED-24 D on enclosed inquiry slip

PARTS FEEDER
handles up to 200 pieces per minute



With motor-driven drum and variable speed control, Model FE-103 feeder will handle up to 200 parts per minute. The compact feeder is easily installed in either dial-index or in-line transfer setups with power screwdrivers, positioners, or other assembly equipment. Drum cleats for moving parts to the straight delivery track are made from spring steel and molded rubber to prevent damage to the parts. Pieces with up to 1½-in. diameter or 3-in. length can be handled. Feeder is shown equipped with Model ES-1 solenoid-operated escapement. Needle-type air nozzle removes misoriented parts from the track. • **Dixon Automatic Tool, Inc.**, 2300 23rd Ave., Rockford, Ill.

For more details circle NED-25 D on enclosed inquiry slip

VERSATILE POWER PACKAGE

DUFF-NORTON RAM-PAC®
HYDRAULIC RAMS AND PUMPS

The Duff-Norton Ram-Pac line provides a versatile source of power to apply from 10 to 100 tons of force in any direction—with little effort.

The twelve rams may be used with the hand or power pumps as portable sources of power and for permanent installation in hydraulic jigs, fixtures and presses.

The Ram-Pac line has five pumps—two hand, one air-hydraulic, one electric and one gasoline. Attachment units and accessories are available. For details ask your distributor or write for Bulletin AD-90—N.

DUFF-NORTON COMPANY
P. O. BOX 1889, PITTSBURGH 30, PA.

For more details circle NED-26 D on enclosed inquiry slip

5 machines in 1

LENNOX TRU-EDGE METLMASTR

The "All American" Shearing, Forming and Piercing Machine

If you work in sheet or plate, here is the one machine that fits perfectly into your PROFIT picture! It eliminates costly dies and gives you complete operational versatility—Investigate now!

LM2

AVAILABLE IN FOUR MODELS

Write today for complete information on the METLMASTR

LENNOX
TOOL and MACHINE BUILDERS
636 N. Baxter St. • Lima, Ohio
See us in Detroit Booth 846 ASTME Show

For more details circle NED-27 D on enclosed inquiry slip

today's most "able" HAND TYPE CLEANER by IDEAL

• VACUUMS
• BLOWS • SPRAYS
• DRIES*

HEAVY DUTY MODEL. Medium and Light Duty models also available.

Capable . . . Delivers efficient, economical, all-around service — whether you use it as a vacuum, blower, sprayer or drier*. Cast aluminum housing, streamlined and light in weight, makes possible long, continuous use without operator fatigue.

*Heater Nozzle available for Light Duty Model only.

Durable . . . Outlives lesser cleaners because it is ruggedly built to withstand the roughest industrial use. Heavy Duty 1⅓ H.P. motor, air-cooled for extra long life, blows at a velocity of 26,500 feet per minute.

Adaptable . . . Economically converts to Tank Type cleaner in less than a minute.

TANK CONVERSION PACK

Multiply the usefulness of IDEAL'S Heavy and Medium Duty Hand Type Cleaners by converting to a powerful, all-purpose STANDARD Cleaner. Conversion Pack consists of wheel-mounted 12-gallon steel tank and large dust-tight bag.

Sold Through America's Leading Distributors
In Canada: Irving Smith, Ltd., Montreal

IDEAL INDUSTRIES, Inc.
1032-D Park Avenue, Sycamore, Illinois

Please send me full catalog data on IDEAL'S Hand Type Cleaners and Conversion Packs.

Name_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-28 D on enclosed inquiry slip

Air temperatures to 950° F accurately controlled in heaters, dryers, ducts, ovens with CHROMALOX® Electric Finstrip Heaters

For drying, baking, curing, space heating . . . anywhere you need uniform heat under forced circulation, here is the clean, fast, economical answer. Chromalox Electric Finstrip Heaters install quickly and easily as individual units, or as factory assembled banks. Low original cost. Maintenance-free. Parallel fin design permits maximum heat with minimum turbulence of air stream. Choice of steel or chrome sheaths. Moisture proof types available.

FREE—Send today for these 2 BIG HEATING HELPS

Catalog 60—Describes complete Chromalox Electric Heating line.

Booklet F 1550—"101 Ways to Apply Electric Heat."

Edwin L. Wiegand Company
7509 Thomas Boulevard • Pittsburgh 8, Pa.
91672

▲ For more details circle NED-29 D on enclosed inquiry slip ▲

Bullard TIP-LOCK Safety hoist hooks lock loads in and protect men and materials. So rugged and simple, they will operate for years with practically no maintenance ...yet the TIP-LOCK hook is made with such precision that a touch of the finger opens the gate. In sizes 6 (5,500 lbs.) through 18 (100,000 lbs.) to fit all makes and models of hoists, cranes and derricks.

BULLARD
INDUSTRIAL SAFETY EQUIPMENT

Write for Tip-Lock Safety Hoist Hook Data Sheet

E. D. BULLARD CO.
SAUSALITO, CALIFORNIA

▲ For more details circle NED-30 D on enclosed inquiry slip ▲

NEW EQUIPMENT DIGEST
A PENTON PUBLICATION

PENTON BUILDING, CLEVELAND 13, OHIO • MAin 1-8260

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Browning Mfg. Co.—Load rating and comparison charts, and specifications on an extensive line of two and four-hole flange blocks with sealed bearings, low and high pillow blocks with re-lube bearings, pillow blocks with sealed bearings, flange units with re-lube bearings, tapered roller bearing pillow and flange blocks, and malleable housing take-up units are found in Catalog BU-103-A.

▲ For more details circle NED-31 D on enclosed inquiry slip ▲

NEW, USEFUL DATA on STOCK Roller Conveyors

Logan's new Bulletin 80 helps point the way to important savings in conveyor buying. Logan Stock Roller Conveyors can be assembled many ways to serve your needs—at big savings over made-to-order conveyors. Immediate shipment from stock. Conventional and light weight models—steel or aluminum—in wide range of spacings and roller lengths. Built to same high quality standards as Logan's custom-engineered conveyors. Write for your copy today!

LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KENTUCKY

Logan Conveyors

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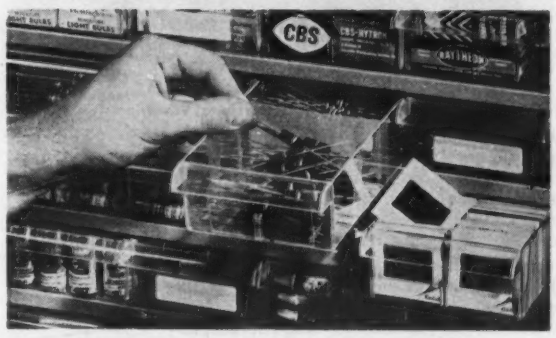
CUT COSTS with PLANNED SMALL PARTS STORAGE!

Conserve valuable space, reduce costly "looking" time with Akro-Mils Small Parts Storage Cabinets. 102 Stock models available, others can be built to your specifications.



Complete study in the science of efficient small parts storage for offices, factories, laboratories, homes.

SEND FOR FREE STUDY! Ask for Bulletin F. S.

A-M

AKRO-MILS, INC.
Box 989P • Akron 9, Ohio

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FREE!

Get your free copy of "How to make your own machine and repair parts quicker and easier" . . . 24 pages. It tells the story of STRESSPROOF®, the all-purpose steel bar that *doesn't have to be heat treated*, yet is strong, machines faster, and wears better.

One stock of STRESSPROOF will take care of most of your needs. STRESSPROOF is available from your Steel Service Center.

La Salle STEEL COMPANY
1478 150th STREET • HAMMOND, INDIANA

▲ For more details circle NED-34 D on enclosed inquiry slip ▲

REDUCE DOWN TIME
•
PRODUCTION INTERRUPTION
•
MAINTENANCE COST with

TARGET SPRAY LUBE

METAL RESURFACER, LUBRICANT, AND MOLD RELEASE

WE ALSO MANUFACTURE TARGET DIE LUBE STICK

Resurfaces dies, die guide pins, cam dies, die inserts; lubricates chains, sprockets, conveyors, vertical and horizontal crosshead screws . . . hard-to-reach moving parts. Pays for itself over and over in time and money saved.

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WRITE FOR INFORMATION — DISTRIBUTOR TERRITORY OPEN

CHEMICAL LUBRICANTS CO.
Engineered Lubrication—Metal Cutting, Drawing, and Forming Compounds; Grinding and Cleaning Compounds; Special Lubricants
2300 NORTH WOODWARD AVE., ROYAL OAK, MICHIGAN

▲ For more details circle NED-35 D on enclosed inquiry slip ▲

MACWHYTE MONEL METAL WIRE ROPE RESISTS CORROSION

Macwhyte Monel Metal wire rope is a preformed wire rope of a high-nickel-content alloy steel. Monel Metal is more resistant to corrosive substances than any other commercial metal. Monel Metal wire rope will resist pickling solutions, salt water, fruit juices, food acids, soaps, and alkaline substances. It also resists such acids as sulfuric, hydrochloric, and hydrofluoric. It is ideal for use on hoists, conveyors, and controls exposed to highly corrosive conditions.

For more information, or specific recommendations for your application, write: Macwhyte Wire Rope Company, Kenosha, Wis., U. S. A. Ask for bulletin 49-30.

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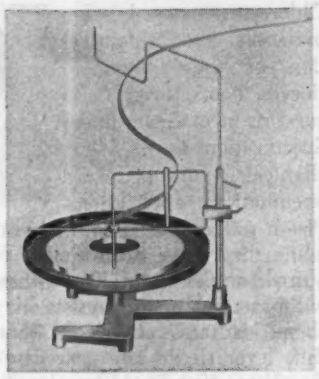
MACWHYTE Wire Rope COMPANY

▲ For more details circle NED-36 D on enclosed inquiry slip ▲

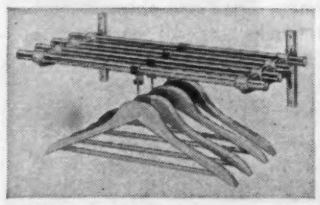
STOCK REEL takes up to 6-in. wide material



Loaded without disassembly, the ball bearing mounted platen of this automatic stock reel is rotated by the natural spring of the uncoiling stock. A movable stock bar on the guiding mechanism gives good initial control. Reel takes up to 6-in. wide material of any thickness that can be coiled. Five available sizes take 18, 24, 30, 36, and 40-in. diameter coils. ● Durant Tool Co., 15 Thurbers Ave., Providence 5, R. I.

▲ For more details circle NED-39 D on enclosed inquiry slip ▲

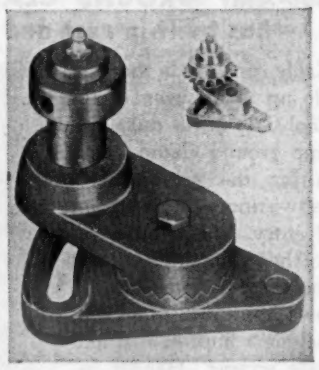
COAT & HAT RACK projects only 11 in. from wall



Compact, wall-mounted coat and hat rack which projects from wall only 11 in. can be used in shallow and confined areas, such as in small closets or behind doors. Coats, held four-deep and spaced apart, hang parallel to wall. Hangers have unusual hookless "hooks" which slip into fixed receptacles that are permanently attached to the hat shelf, formed of parallel aluminum tubes. Shelf lengths are 2 ft or longer to fit space. ● Vogel Peterson Co., Elmhurst, Ill.

▲ For more details circle NED-40 D on enclosed inquiry slip ▲

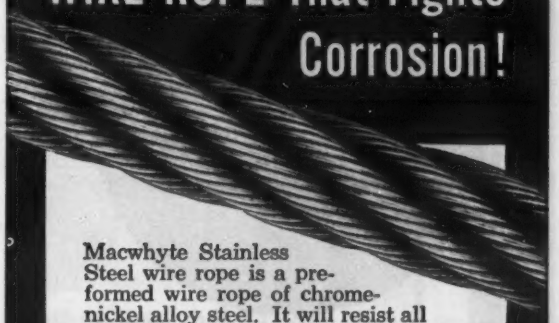
DRIVE TENSIONER takes up chain and belt drive slack



Serrated rotating arm and adjusting slot of this universal drive tensioner permit vertical or horizontal positioning through 360 degrees. It takes up slack in chain and belt drives. A bolt holds the arm in position. Fine scale adjustment is provided by the bolt in the adjusting slot. Standard 2-in. long shaft for sprocket or pulley has a grease fitting. Also offered are 3 and 4-in. long shafts for multiple width drives. ● Brewer Machine & Gear Co., 1441 N. Second St., St. Louis 6, Mo.

▲ For more details circle NED-41 D on enclosed inquiry slip ▲

WIRE ROPE That Fights Corrosion!



Macwhyte Stainless Steel wire rope is a preformed wire rope of chrome-nickel alloy steel. It will resist all manner of atmospheric corrosion, alkaline conditions, acids of an oxidizing nature (such as nitric), neutral brines, food substances, marine atmospheres, and temperatures harmful to ordinary carbon steel ropes.

For more information ask for circular 4930. Macwhyte Wire Rope Company, Kenosha, Wisconsin, U.S.A.

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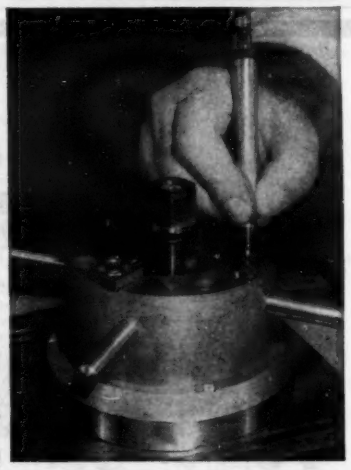
MACWHYTE Wire Rope COMPANY

▲ For more details circle NED-43 D on enclosed inquiry slip ▲

NEW ROTOR Airiter offered on money-back guarantee

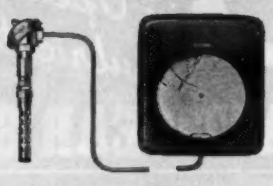


You can buy the new Rotor *Airiter*, try it on your marking jobs for 5 days, then get your money back if it doesn't meet your expectations! Find out how this new marking tool outperforms all others. Its short-stroke carbide stylus makes up to 12,000 blows per minute...finely controlled by a throttle mounted on the tool. The *Airiter* marks parts and tools of all sizes...all materials...easier and faster than any other method. Try it in your shop and see how it writes circles around other methods! Send us your purchase order. Money refunded if, after a 5-day trial, the tool is unsatisfactory. *The Rotor Tool Company, 26331 Lakeland Boulevard, Cleveland 32, Ohio.*

Only $49.50 plus postage DEALERSHIPS AVAILABLE

▲ For more details circle NED-37 D on enclosed inquiry slip ▲

WIDEST RANGE OF EQUIPMENT FOR HUMIDITY RECORDING



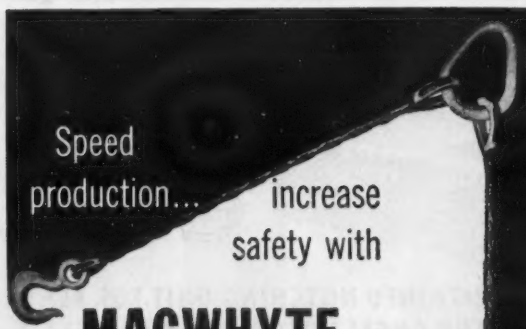
No matter what problems you face in obtaining suitable humidity measurements and records, the unique versatility of Foxboro Humidity Instrumentation offers an appropriate solution . . . recorders, recording controllers, and indicators for relative humidity (hygroscopic type) and wet-and-dry bulb measurements, and, using the exclusive Dewcel element, direct reading dewpoint and absolute humidity measurements. Available in portable, close-coupled and long-distance types; with round or rectangular cases.

Get the complete story in Bulletins 11-11A and 11-14A. The Foxboro Company, 664 Neponset Avenue, Foxboro, Mass., U.S.A.

FOXBORO HUMIDITY INSTRUMENTS

▲ For more details circle NED-44 D on enclosed inquiry slip ▲

Speed production... increase safety with



MACWHYTE SLINGS

Safer, easier, and faster handling is assured by Macwhyte's complete line of balanced braided slings, single-part wire rope slings, and "Safe-Lock" swaged fitting slings. Ask for Sling Bulletin 5308-R. Macwhyte Wire Rope Company, Kenosha, Wisconsin, U.S.A.

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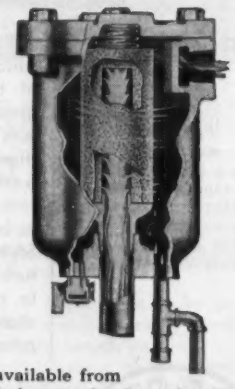
MACWHYTE Wire Rope COMPANY

▲ For more details circle NED-38 D on enclosed inquiry slip ▲

EXCESSIVE AIR TOOL MAINTENANCE?

The majority of air tool down time and maintenance cost can be traced directly to dirty compressed air. Rust, pipe scale and other foreign materials are picked up from the air system by the moving air stream. This entrained debris is a sure source of trouble if allowed to enter your air operated equipment.



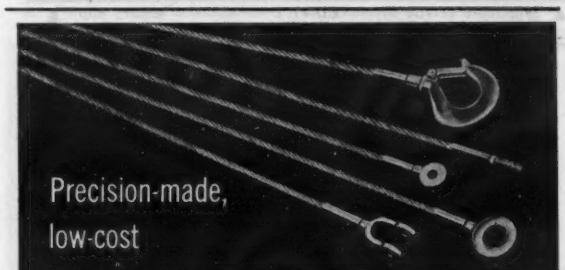
An Adams Poro-Stone filter is scientifically designed for maximum separating efficiency. Centrifugal forces trap entrained solids and liquids in the exclusive interior shell slots. They then drain into the lower liquid chamber for periodic removal. The gas then is completely cleaned as it diffuses thru the minute voids of the Poro-Stone element.

Throughout their operating range, they require only ½ PSI pressure drop—a negligible reduction from line pressure. Virtually no maintenance or servicing is required—assuring continued cost cutting, trouble free air.

Adams Poro-Stone air filters are available from stock in a wide range of sizes. Find out today how they can eliminate your compressed air problems. Write for Bulletin 117.

R. P. ADAMS CO., INC.
227 East Park Drive • Buffalo 17, New York

▲ For more details circle NED-42 D on enclosed inquiry slip ▲



Precision-made, low-cost MACWHYTE CABLE ASSEMBLIES

"Safe-Lock" wire rope assemblies are made in a wide range of sizes for machine parts, controls, and operating devices. They are fabricated to the exact size and length you need, with fittings on one end or both ends—ready to use for safe, easy, quick, low-cost installation. Ask for catalog 5601. Macwhyte Wire Rope Company, Kenosha, Wis., U.S.A.

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MACWHYTE Wire Rope COMPANY

▲ For more details circle NED-45 D on enclosed inquiry slip ▲

RAY-BUF...

new all-purpose polishing pad

Polishes faster—Ray-Buf's deep soft pile of 100% virgin wool gives higher luster faster.

Polishes evenly—New design puts tufts in controlled concentric circles, perfectly balanced, to give even polish.

Selected first-quality yarns—Stay fresh and resilient through repeated applications. Give high-quality results.

Washable—Tufts are firmly anchored to tough canvas backing. Won't pull out even after repeated washings.

Write for Ray-Buf bulletin, prices, quantities.

Schlegel MANUFACTURING COMPANY
P. O. Box 197, Rochester 1, N. Y. In Canada: Oakville, Ontario

▲ For more details circle NED-46 D on enclosed inquiry slip ▲

A New Development in Open Gear Lubrication

PLASTIGEAR 815

OPEN GEARS RACKING DIPPER STICKS

Extremely adhesive, non-melting, waterproof and high film strength. Stable at all temperatures—will not drip off with heat or chip off with cold.

We believe Plastigear 815 is the best open gear or dipper stick lubricant manufactured to date. No solvents or pre-heating—use as is!

Want proof? Sample and information will be furnished on request.

THE WARREN REFINING & CHEMICAL CO.
CLEVELAND 2, OHIO

▲ For more details circle NED-47 D on enclosed inquiry slip ▲

FREE

EMPLOYEE MOTIVATION KIT

INCLUDES:

- **MULTI-COLOR DISPLAYS**
  QUALITY WORK
  WASTE REDUCTION
  INJURY PREVENTION
- **SUPERVISORY GUIDANCE**
  "CREATIVE THINKING"
  "MOTIVATION STUDY"
- **50 PAGE PLANNING GUIDE**

This valuable kit is yours without obligation. Simply fill out the coupon and mail it today.

ELLIOTT SERVICE COMPANY, INC.
MOUNT VERNON, NEW YORK

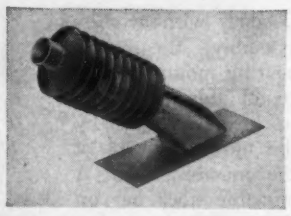
ELLIOTT SERVICE COMPANY, INC.
Dept. B, Mount Vernon, N. Y.

Please provide me with the Elliott "Employee Motivation Kit."

Name .....
Title .....
Firm .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle NED-48 D on enclosed inquiry slip ▲

SLEEVES & BOOTS
protect piston rods, rams, drives

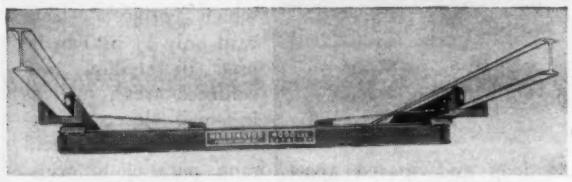


Chloroprene coated nylon materials used in fabrication of these accordion sleeves, boots, covers, and curtains meet Government Specifications in many mechanical, hydraulic, and pneumatic applications. Piston rods, rams, jacks, and entire drives are protected while they move horizontally, vertically, or at any required angles. Material withstands −80 to 220° F without cracking and resists oil, grease, dust, dirt, sand, chemicals, and abrasives. Photo shows combination shift lever sleeve and gear case cover. • **A & A Mfg. Co.**, 712 S. 12th St., Milwaukee 4, Wis.

▲ For more details circle NED-49 D on enclosed inquiry slip ▲

PACKAGED I-BEAM CRANES
models up to 5-ton capacity

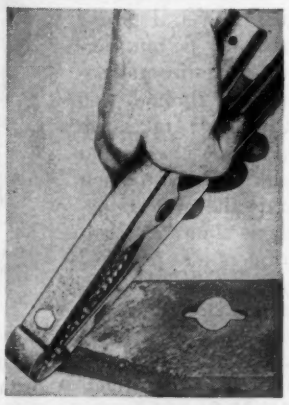
Top running or underhung models rated to 5 tons comprise line of packaged cranes. They are shipped complete with assembled end trucks and all parts except



the I-beam and drive shaft. Cranes are easily installed without drilling or welding, and can be adapted to different spans and sizes of rails and beams. Line includes 2-ton top or bottom-running, 5-ton top-running, 5-ton bottom-running, and 1 and 2-ton gantry models. • **Harrington Co.**, Gravers Road, Plymouth Meeting, Pa.

▲ For more details circle NED-50 D on enclosed inquiry slip ▲

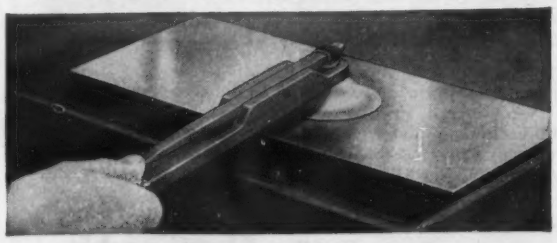
300-AMP GROUND CLAMP
has built-in rust and scale scraper



Cable runs inside the handle up to the jaws of the Kool-Grip heavy duty 300-amp ground clamp, minimizing the possibility of its twisting off at the point of entry. The handle will not heat up, since current does not pass through it. Jaws open to 2½ in. and include a built-in rust and scale scraper. Handle insulators are optional. • **Twentieth Century Mfg. Co.**, 224 W. 82nd St., Minneapolis, Minn.

▲ For more details circle NED-51 D on enclosed inquiry slip ▲

FOR SAFETY ON THE JOB . . . FOR SURE



IPCO SAFETY VACUUM LIFTERS speed handling of sheet metal blanks . . . protect operators of high and low stroke punch presses. Style DA40 is all aluminum construction . . . features 2½" diameter Neoprene cup . . . lifts and holds parts securely—releases instantly when vacuum is broken. Overall length 15". Styles WH40, WH41, WH42 feature wood handle, are available in range of lengths and cup diameters. Additional data and prices on request.

COMPLETE SAFETY ON THE JOB BEGINS WITH IPCO HEADWEAR, APPAREL, EYE PROTECTION AND ACCESSORY EQUIPMENT. WRITE FOR COMPLETE SAFETY PRODUCTS CATALOG.

IPCO Reg. U.S. Pat. Off. 9-811
SAFETY PRODUCTS
INDUSTRIAL PRODUCTS COMPANY
2807 N. Fourth Street • Philadelphia 33, Pennsylvania

▲ For more details circle NED-52 D on enclosed inquiry slip ▲

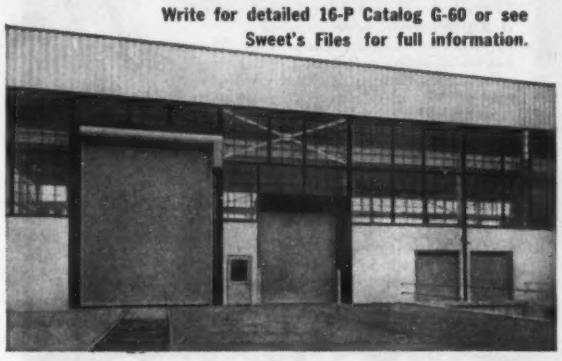
Mahon rolling steel doors

SAVE SPACE
SAVE SERVICE
SAVE COSTS

in sizes and types to fit your application

Rolling Steel Doors are the proven and best way of closing any type opening. For a plant, distribution center or loading dock—in new or remodeled facilities—Mahon has the right Door for the job. Rugged, easy operating, Bonderized (and synthetic baked enamel protected) Steel Doors, power or manually operated, will give you long, trouble-free service. If damaged, they are completely repairable by an experienced Mahon crew . . . service contracts available.

Write for detailed 16-P Catalog G-60 or see Sweet's Files for full information.



M A H O N

THE R. C. MAHON COMPANY • DETROIT 34, MICHIGAN
Manufacturing Plants—Detroit, Mich. and Los Angeles, Calif.
Sales Offices or Representatives Located in All Principal Cities

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If you can't eliminate drips... *prevent slips with* SOL-SPEEDI-DRI®

Cleans, slip-proofs floors in a jiffy!

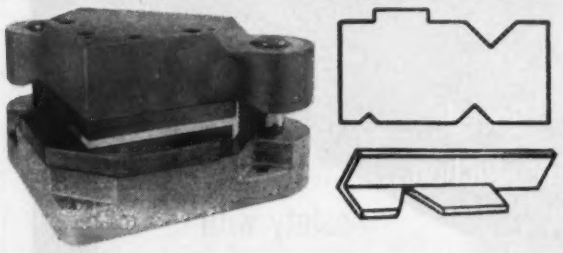
Here's low-cost accident insurance in a bag! Spread amazing SOL-SPEEDI-DRI carpet of safety on with a rake or broom...thirsty granules *pull deep deposits of oil, grease or liquid out of floor.*

Leave on, or remove and *reuse* until saturated! Mineral...won't burn! Each lb. contains over 13 acres of absorptive surface area. . . . *and no dust problem with SSD!*

Write today for generous **Free** *sample!*

SPEEDI-DRI DIVISION
Minerals & Chemicals Corporation of America
197 Essex Turnpike, Menlo Park, N. J.

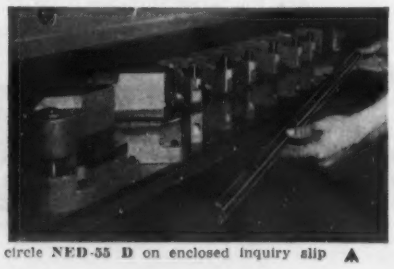
▲ For more details circle NED-54 D on enclosed inquiry slip ▲



SELF CONTAINED NOTCHING UNIT FOR FLAT STOCK AND ANGLE NOTCHING BY TOOLSET.

For press brake or punch press operations. Models are available with 5½ inch shut height and 2 19/32 inch die height, or 8⅜ inch shut height and 3½ inch die height. Notch capacity up to 5 x 5 inches. Material capacity up to ¼ inch thick mild steel. Special radius or corner notches can be furnished. Write for catalog or quotation.

TOOLSET INC.
1413 MILITARY RD.
BUFFALO 17, N. Y.



▲ For more details circle NED-55 D on enclosed inquiry slip ▲

OIL-TIGHT and DUST-TIGHT

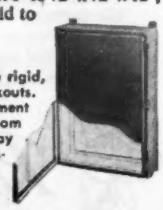
ELECTRICAL ENCLOSURES

CONTROL PANEL

TWO DOOR, FLOOR MOUNTED ENCLOSURES

These welded sheet steel units are strong, rigid and especially designed to protect electrical controls from dust, dirt, oil and water. No holes, no leakage points. Doors are completely gasketed to make tight seal. Special construction eliminates center post—simplifies removal of instrument panel. Interior finished in baked white enamel, exterior has gray prime coat. Ten standard sizes from 54" x 42" x 8" to 72" x 72" x 12", immediately available from stock. Or we can build to your specifications.

SINGLE DOOR, WALL MOUNTED UNITS



Oil-tight and dust-tight single door units offer same rigid, welded, sheet steel construction. No holes, no knockouts. Gasketed clamp-door seals tight. Removable instrument panel. Twenty standard stock sizes ranging from 16"x12"x6" to 60"x36"x8". White enamel interior; gray prime coat exterior. Units are ideal for purged or pressurized systems in dust-laden or flammable atmospheres.

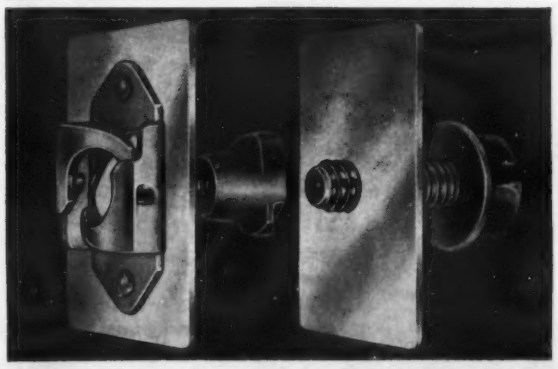
Hoffman ENGINEERING CORPORATION
Dept. NED-101, ANOKA, MINNESOTA, Phone: HArrison 1-2240

▲ For more details circle NED-56 D on enclosed inquiry slip ▲

This handy reference describes Lewis-Shepard's *complete* line of "manually-operated," "intermediate" and "all-electric" equipment. Here is everything you need for a fully-integrated materials handling system. Write today for your free copy of L-S Condensed Catalog 80-204.

LEWIS-SHEPARD®
174 Walnut Street, Watertown 72, Mass.

▲ For more details circle NED-57 D on enclosed inquiry slip ▲



NEW! ESNA QUICK RELEASE NUT

Just a quarter turn locks and unlocks ESNA's unusually versatile self-locking panel fastener.

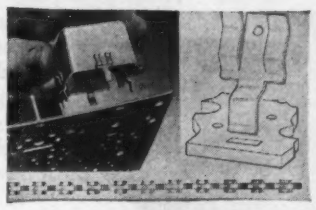
The simple two piece design comprises a retainer basket and special self-locking nut which is installed on any standard ¼" bolt (*you* supply) to provide a practical stud that can be locked-unlocked countless times. Use of the stop nut permits infinite grip adjustments on the bolt, eliminating multiple length studs; original setting can be easily re-adjusted to compensate for panel loosening due to wear. Perfect for applications where quick access is necessary for normal operating or maintenance requirements.

For details write Dept. S48-437, Elastic Stop Nut Corporation, 2330 Vauxhall Road, Union, New Jersey.

ESNA ELASTIC STOP NUT CORPORATION OF AMERICA

▲ For more details circle NED-58 D on enclosed inquiry slip ▲

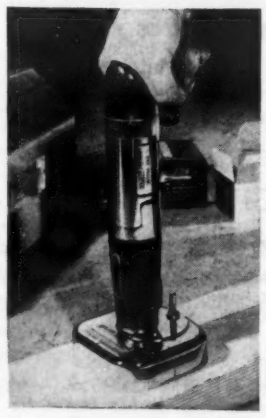
SPRING CLIPS for attaching shielding cans



These 0.016-in. pre-tinned brass spring clips for attaching shielding cans to printed circuit boards are available in chain form on reels for rapid machine application. Clips are fed, cut off, and dimpled onto the can in one operation and can be attached, four clips per can, at rates up to 500 cans per hour. Once clips are soldered into the board, cans may be easily removed and reinserted without loss of configuration or retention. • Malco Mfg. Co., Dept. ND-5, 4025 W. Lake St., Chicago 24, Ill.

▲ For more details circle NED-59 D on enclosed inquiry slip ▲

POWDER-ACTUATED HAND TOOL drives studs into concrete, steel at rate of up to 6 per minute



As many as six ¼ or ⅜-in. diameter special steel fasteners can be set in 1 min with this Nelson powder-actuated hand tool. Wood and metal are anchored to concrete or steel with alloy drive studs ranging in length from 1 to 6 in. Threaded or headed studs and eye pins for concrete are also available. Model 660 stud driver weighs less than 6¾ lb, is 14 in. long, and uses only ¼-in. drivestuds and .25-caliber charges.

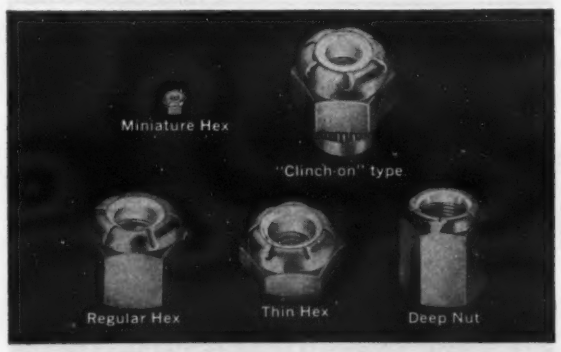
Model 600, with interchangeable ¼ and ⅜-in. barrels, takes .22 or .25-caliber powder charges. Power and penetration are easily controlled by positioning the stud at various distances from the cartridge with simple tool. Thus, one power load can be used for several applications. Fastening lighting fixtures and metal framing to concrete or steel, suspending duct work, hanging pipelines, and anchoring equipment are typical applications. • Gregory Industries, Inc., Nelson Stud Driver Div., 2717 Toledo Ave., Lorain, Ohio.

▲ For more details circle NED-60 D on enclosed inquiry slip ▲

Precision Tools Catalog

L. S. Starrett Co.—Eighty-eight new and improved precision tools are shown in 48-page Bulletin 143, supplementing company's line of hand measuring tools, precision instruments, dial indicators, steel tapes, hacksaws, hole saws, band saws, band knives, and ground flat stock. New items include master vernier height gages and calipers, micrometer calipers, micrometer depth gages, protractors, dividers and trammels, Dial-Master indicators, gages, and tool chests.

▲ For more details circle NED-61 D on enclosed inquiry slip ▲



THERE'S A STANDARD ELASTIC STOP NUT FOR EVERY BOLTED ASSEMBLY

Whether you need a self-locking fastener that measures 1/10 inch across the flat—or a husky hex nut that can stand up under the heaviest vibration—look to ESNA.

No amount of vibration, shock, or impact can make an Elastic Stop® nut break loose. Exclusive nylon locking insert grips like a vise—yet never deforms bolt threads and may be re-used again and again. Try it for prestressed or positioned settings—it stays put anywhere on the bolt you set it. For details write Dept. S49-437, Elastic Stop Nut Corporation, 2330 Vauxhall Road, Union, New Jersey.

ESNA ELASTIC STOP NUT CORPORATION OF AMERICA

▲ For more details circle NED-62 D on enclosed inquiry slip ▲

NALGENE Hand Pump

Feather-light and as easy to operate as a siphon

This new NALGENE acid HAND PUMP transfers liquids from carboys, drums, tanks . . . easily, safely and efficiently. Straight-line design and self cleaning internal ball valves assure smooth flow, hydraulic efficiency and long life.

Drip-well on top of pump barrel *prevents outside leaking.*

Removable friction-fit spout can be turned up to eliminate dripping. Made of NALGENE, TYPE H, chemically-resistant polyethylene, 34" reach; Six strokes to a gallon; OD 1-13/16 $15.00 ea.; 10% discount per dozen.

Drum and carboy adapters are available.

For more information write Dept. 191

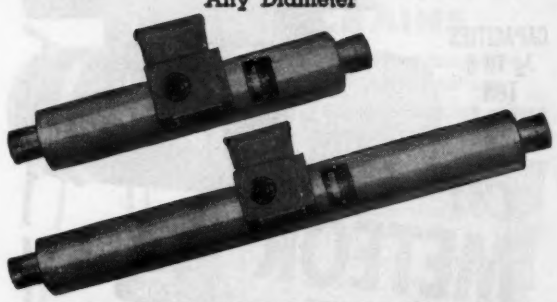
THE NALGE CO. INC. ROCHESTER 2, N. Y.

▲ For more details circle NED-63 D on enclosed inquiry slip ▲

Sta-Warm ELECTRICALLY HEATED

PIPE AND TUBING

Unit Lengths from 1 to 20 feet
Any Diameter



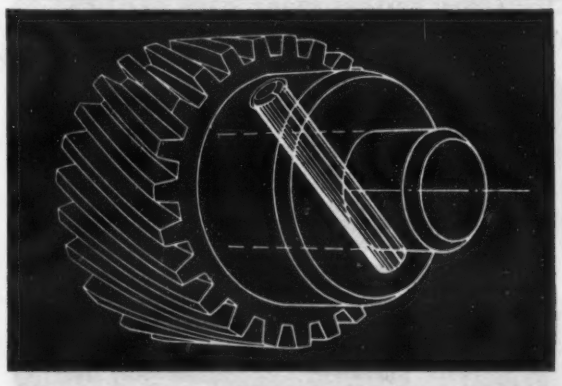
DESIGNED FOR QUICK, EFFICIENT TRANSFER OF HEATED PITCH, ASPHALT, PLASTICS, WAXES, PARAFFIN, RESINS, ADHESIVES, POTTING COMPOUNDS OR LOW MELTING POINT SOFT METALS WITHOUT HEAT LOSS.

Sta-Warm engineers and builds a complete line of rigid pipe and tubing for use with heated melting or pressure tanks. Black or stainless steel, brass, bronze, copper, aluminum, nickel and Monel available.

WANT A CATALOG? WRITE TODAY.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

▲ For more details circle NED-64 D on enclosed inquiry slip ▲



FOR VIBRATION-PROOF PRECISION PINNING WITHOUT HOLE REAMING...TRY ROLLPIN

Rollpin® is a slotted chamfered cylindrical spring pin which can eliminate hole reaming operations and precision tolerances required for taper pin assembly. Oversized in relation to standard fractional drill dimensions, it drives easily into standard production-drilled holes. Compressive spring action locks it securely into place, yet it can easily be drifted out and reused.

As a rivet, dowel, hinge pin, cotter pin or a stop pin, Rollpin versatility and economy is unmatched.

For more details write to Dept. R60-437, Elastic Stop Nut Corp., 2330 Vauxhall Road, Union, New Jersey.

ESNA ELASTIC STOP NUT CORPORATION OF AMERICA

▲ For more details circle NED-65 D on enclosed inquiry slip ▲

BREATHE EASIER

Double filters provide comfortable breathing. Soft rubber face mask gives air-tight fit. Sanitary face cloth protects against dermatitis or chafing. Patented exhalation valve guards against re-breathing stale air.

Cover scientifically designed respirators have been adopted as standard equipment by industries the world over. Free literature on request describing models for every purpose. See your safety equipment supplier or order sample direct. Model shown—only $2.25 postpaid.

H. S. COVER
Dept. 405, South Bend 14, Ind.
"Respirators for Industry Since 1894"

▲ For more details circle NED-70 D on enclosed inquiry slip ▲

Make overhead space contribute to plant earnings

CAPACITIES ½ TO 5 TON

CM METEOR WIRE ROPE ELECTRIC HOIST

• SINGLE AND TWO SPEED MODELS

METEORS offer real materials handling help in many ways. Read all about their unusual operating advantages in the METEOR CATALOG *sent on request*. Illustrates all details of suspension and construction. Prices included.

CM HOISTS

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONT.

▲ For more details circle NED-71 D on enclosed inquiry slip ▲

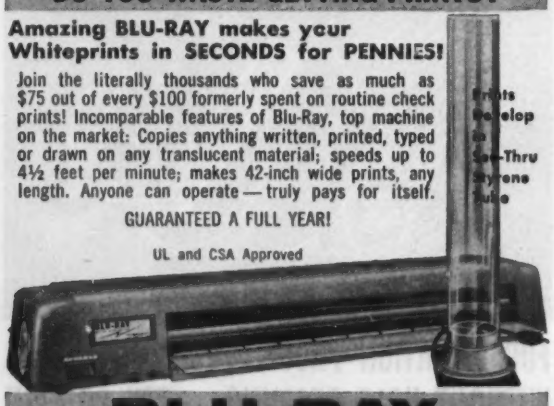
HOW MUCH TIME AND MONEY DO YOU WASTE GETTING PRINTS?

Amazing BLU-RAY makes your Whiteprints in SECONDS for PENNIES!

Join the literally thousands who save as much as $75 out of every $100 formerly spent on routine check prints! Incomparable features of Blu-Ray, top machine on the market: Copies anything written, printed, typed or drawn on any translucent material; speeds up to 4½ feet per minute; makes 42-inch wide prints, any length. Anyone can operate — truly pays for itself.

GUARANTEED A FULL YEAR!

UL and CSA Approved



BLU-RAY

3 LAMPS FOR MORE SPEED • FINGER-TIP SPEED CONTROL • MAKES SEPIA REPRODUCIBLES

FOR FAST ACTION SEND COUPON ON CARD OR LETTERHEAD

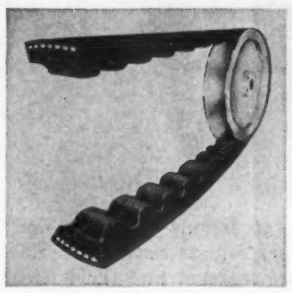
To: REPRODUCTION ENGINEERING CORPORATION
705 Westbrook Road, Essex, Connecticut

☐ I want Blu-Ray demonstration ☐ Rush brochure

Name _____ Title _____
Company _____
Street _____
City and State _____

▲ For more details circle NED-72 D on enclosed inquiry slip ▲

NOTCHED V-BELT
vibrationless in operation

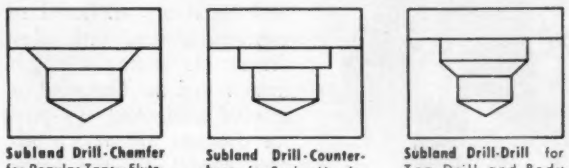


Fully molded and jacketed construction of the CX V-belt eliminates flex cracking and offers high fatigue resistance. The notched belt is vibrationless in operation and runs smoothly over small pulleys. Also cool running, it maintains lateral stability and resists changes in effective length. High tensile strength members are formed into an arch by the molding process, resulting in high sidewall pressure and little or no slippage. Belt is presently available only to original equipment manufacturers. • **Raybestos - Manhattan, Inc.**, Manhattan Rubber Div., 61 Willet St., Passaic, N. J.

▲ For more details circle NED-73 D on enclosed inquiry slip ▲

SUBLAND DRILLS
stocked in all types and sizes

Line of standardized subland drills, available for immediate delivery, comprises the three basic types: The subland drill-chamfer for regular, fluteless, pipe, and



Subland Drill-Chamfer for Regular Taps—Fluteless Taps—Pipe Taps—Coil Insert Taps

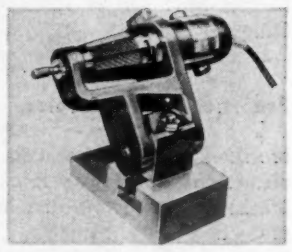
Subland Drill-Counterbore—for Socket Head—Cap Screws

Subland Drill-Drill for Tap Drill and Body Clearance

coil-insert taps; subland drill-counterbore for socket-head cap screws; and subland drill-drill for tap drill and body clearance on bolts, studs, and screws. These standards are offered in all practical sizes and combinations, in three step lengths, and three shank styles to suit virtually any need. • **Mohawk Tools, Inc.**, 920 Main St., Montpelier, Ohio.

▲ For more details circle NED-74 D on enclosed inquiry slip ▲

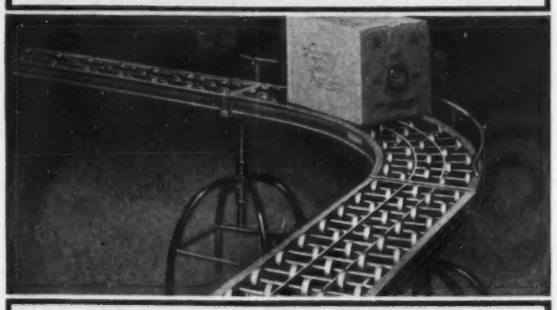
HAND GRINDER
runs at 35,000 rpm no-load speed



Weighing only 3¾ lb, the Series 40 high speed hand grinder drives carbide burrs or mounted wheels for rapid metal removal. The high full-load speed tool has a continuous duty rating of ¼ hp, a no-load speed of 35,000 rpm, and is offered with ¼ and ⅛-in. collets. Length is 10 in. A bracket accessory permits rigid, vibrationless lathe mounting for internal grinding. • **Dumore Co.**, 1300 17th St., Racine, Wis.

▲ For more details circle NED-75 D on enclosed inquiry slip ▲

As Dependable as Gravity and as Inexpensive! BUSCHMAN CONVEYORS



Savings far exceed the low cost of Buschman wheel, roller and belt portables, pre-engineered for particular functions, in all kinds of plants, everywhere. Popular sizes in stock. Buschman also designs special systems; builds standard stocked parts into wheel, roller and belt type units, overhead trolleys and table-cable conveyors, to move products of all shapes, sizes. Consult our agent or write The E. W. Buschman Company, 4482 Clifton Avenue, Cincinnati 32, Ohio.

Buschman CONVEYORS

Complete Conveyor Systems for all Industries—Engineered, Manufactured, Installed
Representatives in Principal Cities

362

▲ For more details circle NED-76 D on enclosed inquiry slip ▲

New Robotron Die Saver Proximity Switch provides . . .

AUTOMATIC PRESS CONTROL

FULL TIME SURVEILLANCE of Press Operations!

- Stops press automatically if malfunction occurs.
- Protects against hazards of multiple heading, die damage, scrap.
- Keeps presses operating efficiently and profitably *with limited supervision.*
- Increases output . . . reduces rejects.

Write for Bulletin 27-B Today!

Robotron® CORPORATION
21300 WEST EIGHT MILE ROAD • DETROIT 19, MICH.

▲ For more details circle NED-77 D on enclosed inquiry slip ▲

REMOVE Paint, Dirt, Scale
CLEAN Brick, Stone, Masonry
PROTECT Metal Surfaces

and Save Money

AIRPLACO *JET-BLASTER*
Wet or Dry SANDBLASTERS

● Efficient, Easy-to-Use ● Air Jet Pick-Up ● Adjustable Flow Control

EXCLUSIVE! "Sand-Saver" remote cut-off valve. No costly mechanical controls. Lets operator shut off air and material at the nozzle. Saves time, labor and materials.

FREE Write for catalog showing all models plus complete line of sandblast accessories.

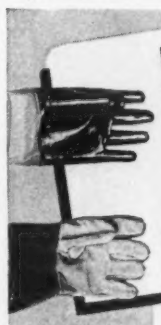
AIRPLACO AIR PLACEMENT EQUIPMENT CO.
1011A WEST 25TH ST. • KANSAS CITY 8, MO

WORLD'S LEADING MANUFACTURER OF "ADVANCED DESIGN" PNEUMATIC PLACING EQUIPMENT

▲ For more details circle NED-78 D on enclosed inquiry slip ▲

DON'T throw away WORN OUT GLOVES!

PLASTIC • LEATHER • FABRIC
Check GLOVCO first!



GLOVCO'S service makes worn out gloves safe and good as new at fraction of original cost.

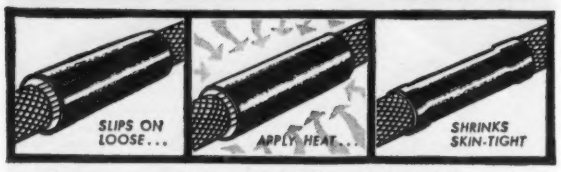
● Yes, before you throw away your old worn out gloves, check GLOVCO'S nationwide service first! GLOVCO is saving industry up to 90% on gloves they once threw away. GLOVCO reclaims worn dirty plastic, leather and fabric gloves, welder's gloves, mitts, hand pads. Also hot mill, terry cloth, asbestos aprons and gloves, sleeves, drop cloths, protective clothing, etc. GLOVCO service is used in thousands of plants from coast-to-coast. Write for details and FREE trial demonstration. Satisfaction guaranteed.

GLOVCO also offers a variety of NEW GLOVES at great savings.

U. S. INDUSTRIAL GLOVE CORP.
9350 Roselawn Ave. Detroit 4, Mich. — 1920 Rose St. Pittsburgh 19, Pa.

▲ For more details circle NED-79 D on enclosed inquiry slip ▲

NEW INSULATION DISCOVERY SHRINKS WITH HEAT!



Cover... protect... insulate in minutes with

SCOTCHTITE BRAND
HEAT REACTIVE TUBING

Now you can add a tough, smooth, seamless vinyl coat to wires, rods, tubes, even odd shapes with "SCOTCHTITE" Heat Reactive Tubing. Just slip "SCOTCHTITE" Tubing over object to be covered—apply heat—and almost immediately the tubing contracts to form a skin-tight insulating cover. Harness cables, ground straps, bus bars, high voltage leads, and tool handles are just a few of the many possible applications. Available in sizes ranging from 3/64 up to 5¼ inch diameter.

What can you do with "SCOTCHTITE"? Send for free sample and complete information. Write Irvington Division, 3M Company, 900 Bush Avenue, St. Paul 6, Minnesota, Dept. EBM-40.

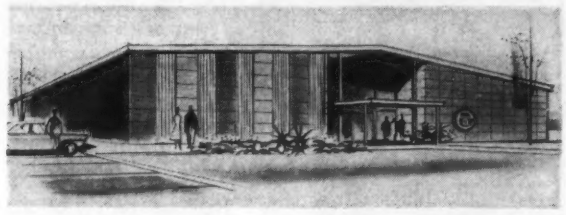
"SCOTCHTITE" IS A REGISTERED TRADEMARK OF 3M CO., ST. PAUL 6, MINN. EXPORT: 99 PARK AVE., NEW YORK 16, CANADA: LONDON, ONTARIO.

MINNESOTA MINING AND MANUFACTURING COMPANY
...WHERE RESEARCH IS THE KEY TO TOMORROW
3M COMPANY

▲ For more details circle NED-80 D on enclosed inquiry slip ▲

STEEL BUILDINGS
pre-engineered type in colors

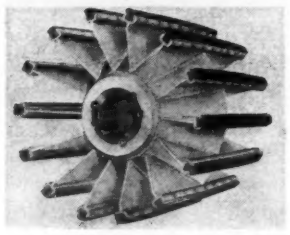
Four types of contemporary Stran-Steel buildings are pre-engineered and mass produced, ready for erection on any site. Clear-span interiors over 100 ft wide,



with 20 or 24-ft bay spacing, provide maximum usable space at minimum cost. Buildings are suited for various industrial and commercial uses. They use colored steel, brick, glass, and porcelain, and are available with nine factory-applied wall and roof panel colors and 72 shades of porcelain panels for individual styling. • **Stran-Steel Corp.**, Detroit 29, Mich.

▲ For more details circle NED-83 D on enclosed inquiry slip ▲

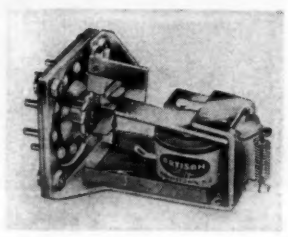
RUBBER-LAGGED PULLEY
transmits maximum traction to belt



High tensile strength rubber bars on the exterior edges of the Turn-Clean wing pulley grip the conveyor belt tightly and spall off dried material on the underside of the belt. Need for pulley cleaning shutdowns is eliminated. The rubber bar compresses upon contact with the belt, then springs back in a cleaning action when arc of contact is broken. With no build-up of sticky or other materials to score and wear belts, their life is extended. • **Van Gorp Mfg., Inc.**, Box 123, Pella, Iowa.

▲ For more details circle NED-84 D on enclosed inquiry slip ▲

STEPPING RELAY
with 2 to 12 positions



Model CS stepping relay can be supplied for operation on all voltages up to 230 v ac and 110 v dc. Its standard contacts switch 0.25 amp and carry 5 amp. Inclusion of an optional auxiliary contact stack increases these contact ratings. Suited for counting, scanning, information storage, and other sequential switching operations, the relay offers a choice of 2, 3, 4, 5, 6, 9, 10, or 12-position single-pole continuous rotation switching. Shorting or nonshorting versions are available. • **Artisan Electronics Corp.**, 171 Ridgedale Ave., Morristown, N. J.

▲ For more details circle NED-85 D on enclosed inquiry slip ▲

"Shortstub" ELECTRODE HOLDERS

Convert the total fluxed portion of every electrode into weld metal — REDUCE STUB WASTE TO A MINIMUM

SPECIFICATION

TWO SIZES FILL ALL NEEDS	Model No.	Cap. Amps.	List Price
See your local welding Distributor or write for further information	4	400	7.70
	6	600	8.80

Quantity prices save you 10 to 20%

Mfd. & Ptd. By
BERNARD WELDING & EQUIPMENT CO.
Pioneer for Modern Welding
10232 AVENUE N, CHICAGO 17, ILL.

▲ For more details circle NED-87 D on enclosed inquiry slip ▲

My name is Paul M. Platzman,

I pioneered the ultrasonic industry. Two well known ultrasonic companies were founded by me. Now, my new organization, Ultrasonic Industries, Inc. is mass producing and selling ultrasonic equipment. No middleman's profit in this factory—direct-to-consumer deal. Tremendous savings are passed on to you. Ultrasonic cleaners are now within the range of everybody's budget. My products stand out because of their unbelievably low money-back-guaranteed prices, free five year service contract, and consistent trouble-free performance under the most gruelling conditions. This is possible because my generators and transducers incorporate the latest advances in ultrasonic technology.

FABULOUS INTRODUCTORY OFFER $99.95
½ GAL. CAP.

Including tank, connecting cable, and instruction manual (export model: 220V-50 cycles: $7.50 add'l.). We will pay all shipping charges to any point within the U.S. (except Alaska and Hawaii) if you enclose check with order.

5 DAY TRIAL
Money refunded (less shipping charges) if not completely satisfied.

Unprecedented 5 year service contract
The DISONtegrator-System 40 is available from stock for immediate delivery in unlimited quantities.

FOR THE FIRST TIME
A choice of 6 beautiful colors for office or laboratory decor: Ivory, Wheat yellow, Turquoise, Desert sand, Pale green, and soft grey. Specify color when ordering.

DISONTEGRATOR® SYSTEM FORTY ULTRASONIC CLEANER

THE LOWEST PRICED ULTRASONIC CLEANER EVER SOLD! Buy one or 100 and save! Rugged, Efficient, Versatile, Fast ...Cleans in Seconds • Simple One Knob Control • Compact • Saves Time and Money!

DISINTEGRATES injurious soils instantly! Semiconductors, relays, crystals, switches, precision potentiometers, optical parts, lenses, timers, meters, ceramics, gears, printed circuit boards, castings, bearings, filters, screens, valves, missile and avionic parts, and instruments.

SEND CHECK WITH ORDER NOW TO: DEPT. 5-NED-4

ultrasonic industries INC.
141 ALBERTSON AVENUE • ALBERTSON, L. I., N. Y. • PIONEER 1-4333

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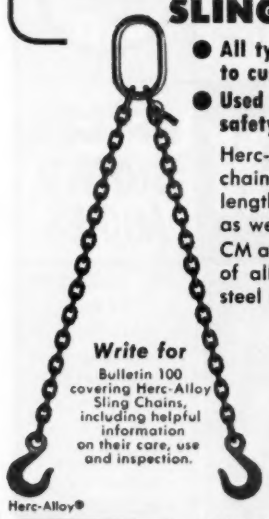
HERC-ALLOY

SLING CHAINS



- **All types and sizes assembled to customers' specifications.**
- **Used throughout industry where safety is paramount.**

Herc-Alloy is the original alloy chain. It is available in running lengths and special assemblies as well as slings.
CM also produces welded chain of all types including stainless steel and bronze.

Write for Bulletin 100 covering Herc-Alloy Sling Chains, including helpful information on their care, use and inspection.

Herc-Alloy®

CM CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
NEW YORK • CHICAGO • CLEVELAND
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In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONTARIO

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protect instruments against shock/vibration

Safeguard instrument performance and accuracy with these economical bonded rubber mountings. Use with most standard meters (GE, Westinghouse, Weston, etc.), install in any position and get positive protection from multi-directional disturbances. Adds only ½" to meter radius. Compact one-piece construction. Quality elastomers bonded to rugged metal rings for extra-long life. Original equipment manufacturers are invited to write for Bulletin 601.

Vibration/shock/noise CONTROL — LORD® BONDED RUBBER

LORD MANUFACTURING CO., ERIE, PENNSYLVANIA

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NOW—low-cost shock and vibration control

Here's a strong, one-piece mounting for furniture, portable tools, motors, engines, blowers, compressors, pumps, machinery. Use it wherever you need efficient shock or vibration attenuation. Versatile design permits shear or compression loading. Threaded studs reduce assembly costs. High-strength bond and oil-resistant elastomer assure long service life. Standard sizes—load ratings to 1050 lbs. Many items stocked for prompt delivery to original equipment manufacturers. Write for bulletin.

Vibration/shock/noise CONTROL — LORD® BONDED RUBBER

LORD MANUFACTURING CO., ERIE, PENNSYLVANIA

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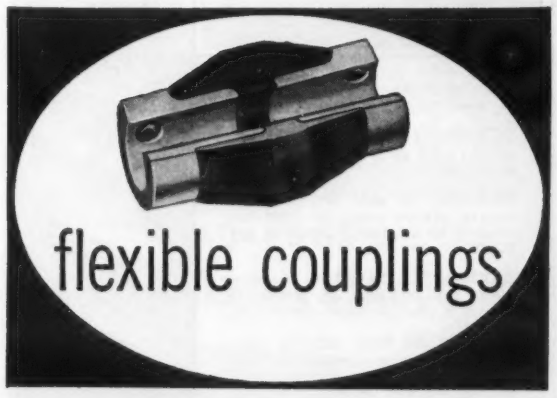
assure smooth, quiet power transmission



Specify Lord Flexible Couplings—get these performance benefits. Efficient isolation of torsional vibration and shock. Accommodation of all misalignment—angular, parallel, axial. Permanently quiet operation. Constant speed transmission—no backlash. No lubrication. Long life under tough operating conditions. Standard bonded rubber couplings from 1/50 to 100 hp. Special designs with torque capacities from inch-ounces to foot-tons. Original equipment manufacturers are invited to write for Bulletin 205.

Vibration/shock/noise CONTROL — LORD® BONDED RUBBER

LORD MANUFACTURING CO., ERIE, PENNSYLVANIA

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Play it Safe in HAZARDOUS AREAS!

GEMCO
EXPLOSION•PROOF
ENCLOSURES

Protect hazardous areas in your plant *economically* with Gemco explosion-proof pushbutton stations and enclosures. Lightweight cast aluminum construction, Gemco modular construction permits special pushbutton stations containing 1 to 64 units in one enclosure.

Specials? Gemco *standard* enclosures are available with receptacles, viewing windows, *plus* pushbutton stations and control panels.

Design and construction; NEMA types 7 and 9.

Write today for Bulletin No. 659 on Gemco explosion-proof enclosures

GEMCO ELECTRIC COMPANY
25685 West 8 Mile, Detroit 40, Mich.

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There's no limit to what you can do with

DEXION

the first and greatest name in SLOTTED ANGLES

- PALLET RACKING
- CONVEYORS
- FRAMEWORK
- WORK BENCHES
- TABLES
- STORAGE RACKS
- PARTITIONS
- DISPLAY STANDS
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- MAINTENANCE PLATFORMS
- MACHINE GUARDS
- DOLLIES
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- CHUTES
- STAIRWAYS
- CATWALKS
- SPECIAL EQUIPMENT

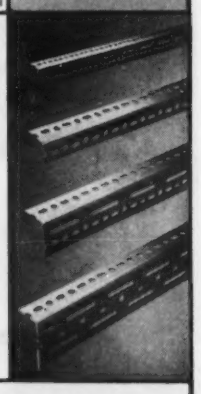
an all-purpose range of 4 SIZES in steel or aluminum

DEXION 112 Midget Size The angle for jobs where great load-bearing capacity is not required.

DEXION 140 Light Duty The equal-flanged DEXION angle for light-duty purposes. For use alone, or combined with DEXION 225 and 300.

DEXION 225 Standard The all-purpose DEXION angle. Combines with DEXION 140 and 300 to solve every equipment problem.

DEXION 300 Heavy Duty The super-rugged angle for use wherever great loads or accidental shock loads must be provided for. Combines with DEXION 225 and 140.



Choose the slotted angle with the world-wide reputation for greatest strength, soundest engineering and most durable finish. Only DEXION offers you a choice of 4 sizes, in both steel and aluminum. Only DEXION offers you such a wide range of useful accessories. Only DEXION gives you the quality that provides truly lower cost.

Write for name of your nearest distributor

DEXION INC. 39-25, 62nd STREET, WOODSIDE 77, N.Y.

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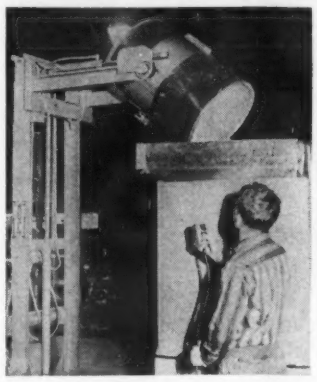
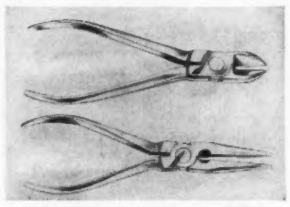
DRUM DUMPER
operates at any height to 72 in.



Drums of liquids, dry chemicals, or metal parts weighing up to 750 lb are inverted 180 degrees for emptying by the portable Tubar dumper. A quick-acting clamp holds the drum for dumping at any height up to 72 in. Remote control of the hydraulic dumping mechanism permits the operator to start or stop operation from nearby vantage point. Models are also available with dumping heights to 110 in. and a fluid drive that makes the dumper a walkie unit. • **Uhrden, Inc.**, 508 Grant St., Dennison, Ohio.

▲ For more details circle NED-93 D on enclosed inquiry slip ▲

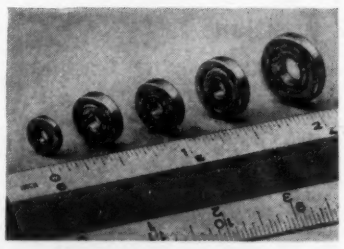
CUTTING PLIERS
long nose and diagonal types offered



Added to line of hand tools are these long-nose and diagonal cutting pliers made of heat-treated and tempered alloy steel. Designed for professional use, both are available with plastic grips if desired. Long-nose pliers, with deep-milled jaws, are available in 6½ and 8-in. sizes, whereas the diagonal cutting pliers are offered in 6 and 7-in. sizes. • **Truecraft Tool Co.**, 2425 S. Michigan Ave., Chicago 16, Ill.

▲ For more details circle NED-94 D on enclosed inquiry slip ▲

THIN-WIDTH BEARINGS
for instruments and small drives



Series of nine thin-width precision instrument bearings is designed for use in synchros, gear trains, potentiometers, servos, and small motors. High outside diameter to width ratio saves space, and units are available without premium charge. Bearings are made to ABEC Class 7 tolerances in sizes from 0.275 to 0.500 in. OD and bores from 0.0937 to 0.1875 in. Open, single, and double-shielded types are included in the series. Balls and rings are Type 440C stainless steel. • **Miniature Precision Bearings, Inc.**, Precision Park, Keene, N. H.

▲ For more details circle NED-95 D on enclosed inquiry slip ▲

CUT COSTS — *speed pressure-sensitive labeling operations with the NEW full automatic*

AVERY LABELER

Avery's new automatic Labeler is designed for applying all sizes of Avery pressure-sensitive Labels in *exacting register* on flat, rounded, concave or irregular surfaces.

Can be simply adjusted to apply 40 to 300 labels per minute—will handle as many as 12,000 Avery Labels *without reloading.*

For special applications—or to meet specific labeling problems, the new Avery Labeler can be modified to fulfill individual requirements.

Always ask for AVERY LABELS *what a difference they make!*

WRITE FOR FULL DETAILS NOW! *there's no obligation*

AVERY LABEL COMPANY, Division 102 • 117 Liberty Street, New York 6
608 S. Dearborn St., Chicago 5 • 1616 S. California Ave., Monrovia, Calif.
Offices in Other Principal Cities.
☐ Please send details on how Avery Labels can save me time and money.
☐ Please have your sales representative call soon.
Name____ Company____ Title____
Address____ City____ Zone____ State____

P.S. Avery File Folder Labels, Correction Tape, Photomounts, and Price Marking Labels are available at stationers everywhere.

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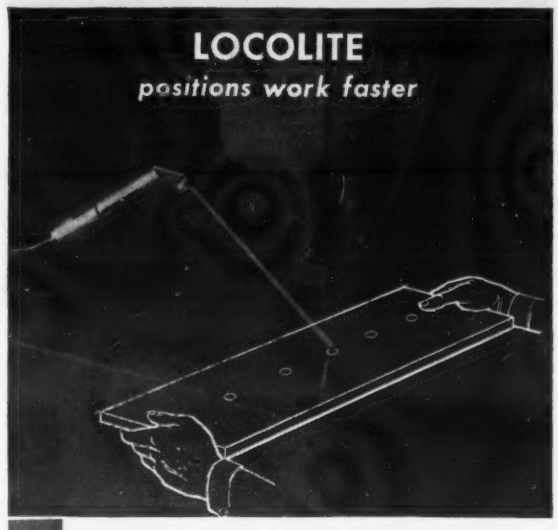
LOCOLITE
positions work faster



Locolite is a miniature spotlight which focuses a controlled beam of light on the work which speeds the positioning of the work on riveting and eyelet setting machines, drill presses, punches, terminal setters and similar equipment.

This low cost light is particularly helpful in blind riveting and eyeleting where the plunger pin is concealed by the work itself. Also useful in locating a spot to be drilled on a drill press.

Locolite save time and money by making possible faster, more uniform production.

Just 3½" long, adjustable Locolite comes complete with transformer, bulb and easy-mounting bracket.

Ask for full information . . . write:

BLACK & WEBSTER, INC.
DEPT. 1, 570 PLEASANT STREET, WATERTOWN 72, MASSACHUSETTS

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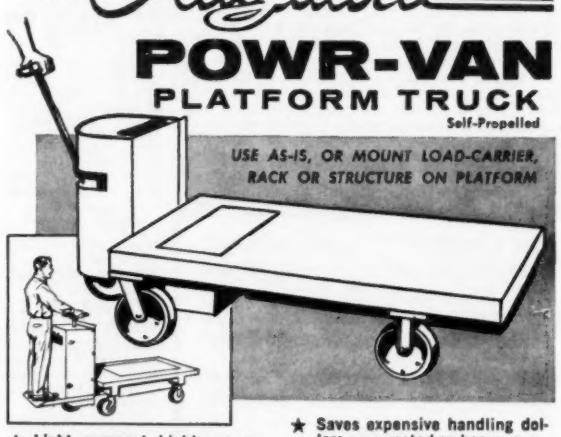
PAY LESS FOR MOBILE POWER with Vanguard

POWR-VAN
PLATFORM TRUCK
Self-Propelled



★ **Light, compact, highly maneuverable** . . . constant traction provides easy steering, regardless of payload weight.

★ **More payload** — carries five to ten times its own weight.

★ **Saves expensive handling dollars** now wasted on heavy, cumbersome load-movers.

★ **Conserves travel time** — no time-outs for tired platform truck pushers. You can count on a measured delivery time from point to point.

Write for Free Catalog
Vanguard MANUFACTURING COMPANY
1908 E. 66th St., Cleveland 3, Ohio • Henderson 2-0464

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New! RADIANT HEATER ASSEMBLY . . . BY THERMEL

LOWEST INVESTMENT
ECONOMICAL OPERATION
HIGHLY EFFICIENT

Write for list of Extra Accessories Available.

Special Sizes Made to Order.

2 WEEKS DELIVERY

HEAT SOURCE Alloy Sheathed Thermatube®.
REFLECTOR Highly Polished Lighting Grade Aluminum.
SECONDARY INSULATION Tubular Element Insulated with Ceramic Bushings at all Mounting Points.

STANDARD SIZES

Cat. No.	Volts	Watts	E.H.L.	O.A.L.	List Price
TR-18	120 or 240	750	18"	24"	$16.90
TR-24	120 or 240	1000	24"	30"	$18.85
TR-30	120 or 240	1250	30"	36"	$22.00
TR-36	120 or 240	1500	36"	42"	$25.20
TR-42	240	1750	42"	48"	$28.40
TR-48	240	2000	48"	54"	$31.60
TR-54	240	2250	54"	60"	$34.80
TR-60	240 or 440	2500	60"	66"	$39.60
TR-66	240 or 440	2750	66"	72"	$42.80
TR-72	240 or 440	3000	72"	78"	$46.00
TR-78	240 or 440	3250	78"	84"	$49.20

Please specify voltage when ordering.

Thermel, inc. 9406 W. Robinson Road Franklin Park, Ill.

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LEADING TEXTILE COMPANY
Announces Development
OF
DISPOSABLE CLOTH TOWELS

YOU ARE INVITED TO TRY ONE OR ALL STYLES
DESIGNED FOR
HAND TOWELS WIPING
POLISHING DUSTING
RSVP FOR SAMPLES & INFORMATION
CHICOPEE MILLS, INC.
47 WORTH ST., N. Y. 13, N. Y.

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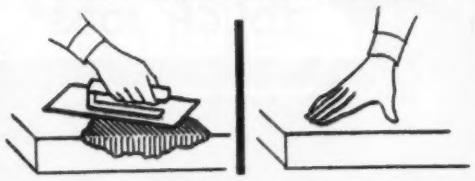
NEW, QUICK, SURE WAY TO PATCH CONCRETE FLOORS



With new Thoropatch, you'll save time and money and get a solid, durable, renewed floor that doesn't look patched. No other cement patch can top these benefits to you:

- Dries to natural concrete color.
- No crusting—curing is complete throughout.
- Highest compressive strength in its field.
- Excellent resistance to most industrial acids.
- Smooth, easy, non-stick troweling.
- Tough feather edges.
- Self curing—fast curing.

Don't accept inferior patching materials. If you do the job right the first time, you won't have to do it over. Standard Dry Wall Products Inc. has been a leader in masonry maintenance since 1912. Write for free Thoropatch brochure.

THOROPATCH
Standard Dry Wall Products Inc.
Box X-11, New Eagle, Pennsylvania

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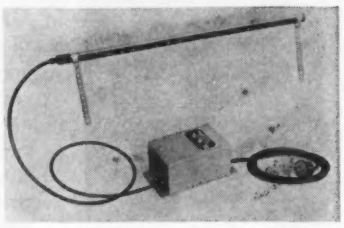
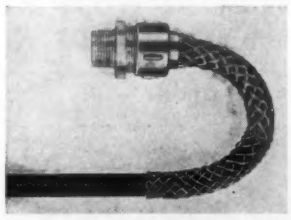
STATIC ELIMINATOR
removes charge from paper, plastics



Statomatic shockless static eliminator removes static charges from paper, plastics, textiles, or other materials to facilitate production operations. Contact with the inductor bar will not cause an uncomfortable electric shock. No harmful rays or gases are emitted by the unit. • Portland Co., 58 Fore St., Portland, Maine.

▲ For more details circle NED-103 D on enclosed inquiry slip ▲

ELECTRIC CORD GRIP
wire mesh type lessens failure



Electric cable failure at the point of connection can be virtually eliminated by this wire mesh cord grip. Flexible cable is reinforced before it enters the rigid connection, controlling the "arch of bend" to prevent sharp bends and ensuing ruptures. Gripping action is distributed along a length of the cable. Grips are available for ¼ to 1 13/16-in. OD cables. • Ralco Mfg. Co., 123 N. Albany Ave., Chicago 12, Ill.

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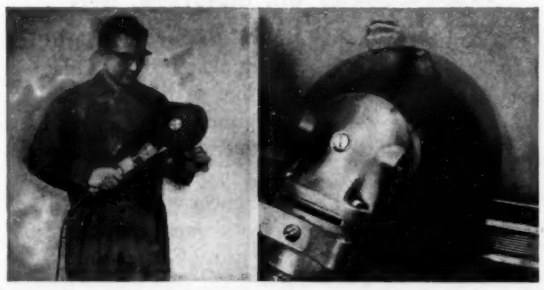
ABRASIVE DISC
work area visible "through" the disc

Work point remains in full view of operator using this fiber-backed abrasive Vizi-Disc with two parallel straight sides. The grinding disc is actually a rectangu-



lar section with a radius at each end. As it rotates, a full inch at the outer edge becomes transparent. Grinding is faster because disc need not be moved away from work point for frequent inspection. Contour work and blending of welds can be done accurately, and metal remains cooler because grinding is intermittent. Discs are made in 7 and 9-in. sizes and surfaced with Metalite aluminum oxide abrasive in standard grit sizes. • Behr-Manning Co., Drawer 808, Troy, N. Y.

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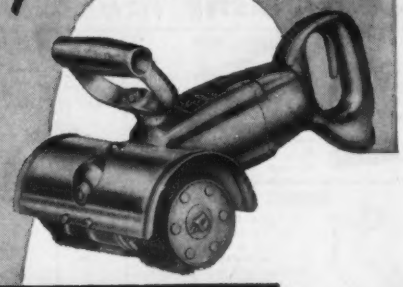
Chip Away



SCALE
RUST
PAINT

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

AURAND MFG. & EQUIPMENT CO.
1322 Ellis St., Cincinnati 23, Ohio

▲ For more details circle NED-107 D on enclosed inquiry slip ▲

Need Drawn or Extruded Aluminum Tube?

Just write

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17272 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

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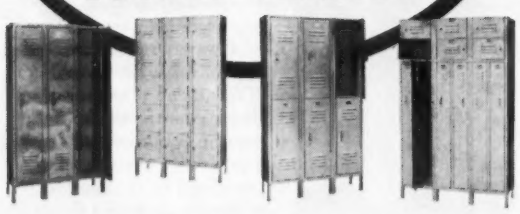
NEW FROM PENCO
20-PAGE LOCKER CATALOG



A complete data file on the finest locker line in the industry. Features over 20 different locker styles—over 1000 sizes.

For your free copy, write direct to:

ALAN WOOD STEEL COMPANY
PENCO DIVISION
406-L North Brower Avenue, Oaks, Pennsylvania

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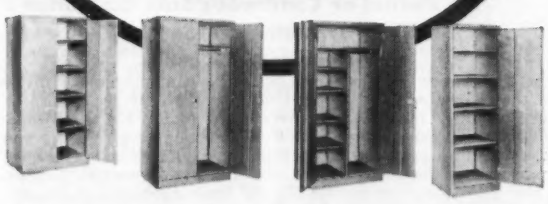
PENCO
STEEL CABINET BULLETIN



PRECISION BUILT • HEAVY DUTY • 6 STYLES
• PHOSPHATIZED • MAXIMUM SECURITY

Request Bulletin B-50. Write direct to—

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PENCO DIVISION
406-C North Brower Avenue, Oaks, Pennsylvania

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NEW FROM PENCO
40-PAGE SHELVING CATALOG

HELPS YOU PLAN BETTER SHELVING
HELPS YOU BUY BETTER SHELVING

Lists over 1000 shelving combinations . . . Bolt Type and Clip Type. Gives STYLES . . . SIZES . . . PARTS . . . PLANNING AIDS.

Write for your copy direct to:

ALAN WOOD STEEL COMPANY
PENCO DIVISION
406-S North Brower Avenue, Oaks, Pennsylvania

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INTRODUCING GAT FASTENERS

for the electrical construction industry

HANG IT FASTER, FIRMER—AT LESS COST

ROD HANGER CLAMP

For suspending ¼" or ⅜" rod, plain or threaded, #8 or #9 wire from beams, joists or flanges. Clamps for ¼ inch rod and under adapt to beam flanges ½ to ⅝ inch thick. ⅜ inch clamp will fit ½ to ½ inch beam flanges. Hammer required.

CHANNEL CLAMP

Used for suspending 1½ inch channel from ¼ inch rod, ⅜ inch rod, and #8 wire. Provides instant, accurate alignment prior to channel installation. Designed to accommodate channel with a ½ inch to 9/16 inch flange width. No tools required.

CONDUIT CLAMP

For rigid and positive holding of ½ inch, ¾ inch and 1 inch O. D. thin wall conduit. This clamp provides ease of application with secure holding for pattern runs both vertical and horizontal. Screwdriver required.

HOLD-DOWN CLIP

For use as intermediate hold-down of ½ inch, ¾ inch, 1 inch O. D. thin wall conduit between rigid support clamps. No tools required.

CABLE AND TUBING CLIP

Wire Hold-Down Clip (illustrated) furnished and priced separately.

One size will snap securely in position to beams and columns having ⅛ inch to ⅜ inch thick flanges. The wire hold down element is rotatable to suit any angle of cable or tubing runs, and quickly adjusts to various diameters of cable or tubing. Bridle Rings, Wire Hold-Down Clip and other holding devices are available on request.

FIXTURE CLIP

For use on rod to firmly position lighting fixtures, etc. May be backed up with second GAT Fixture Clip (or if rod is previously threaded with nut). Eliminates need for threading rod and is fastest method in finalizing fixture height. Available for ¼ inch rod only. No tools required.

LOWERS "IN PLACE FASTENING COST". The GAT fasteners have completely revolutionized the slow conventional methods of fastening from lathing channel, fluorescent fixtures, conduit, tubing, etc. These ingenious clamps do in seconds what takes minutes with other methods.

FASTENER PRODUCTS DIV.

Erico Products, Inc.

2070 E. 61st Place • Cleveland 3, Ohio

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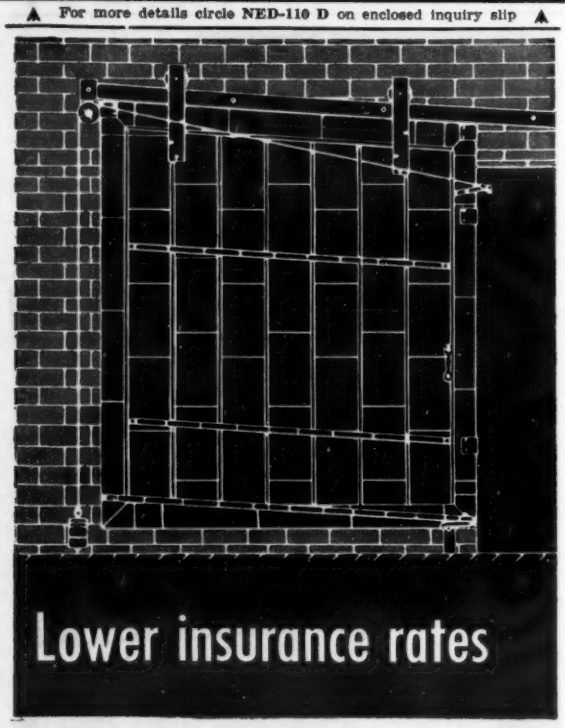

with

Overly tin clad fire doors

In the 1960 Overly Catalog, you will find a listing of our new Tin Clad Fire Door Assemblies, with complete specifications on Overly vertical sliding, inclined sliding, level sliding and swinging units. These door assemblies are made to fit all openings, supplied complete with hardware: authorized U/L labels are A, B, C, D and E. Overly Tin Clad Fire Doors are constructed with a two or three-ply, kiln dried, seasoned wood core covered with standard 20 lb. I.C. Terne Plate that requires no painting. Erection service is available in most areas.

Besides giving efficient protection under severe fire exposure, Overly Tin Clad Fire Doors will bring owners a continual saving, month after month, year after year, in lower insurance rates. Many users find Overly Tin Clad Fire Doors are a self-liquidating expense.

We have an Overly Tin Clad Fire Door for your installation—why not send for the 1960 Sweet's Catalog listing of our assemblies today? Or send your requisition describing wall and opening conditions, and Overly will make a direct quotation.

SEND FOR OUR FREE CATALOG

Overly

MANUFACTURING COMPANY

Greensburg, Pennsylvania

St. Louis 19, Mo., Los Angeles 39, Calif.

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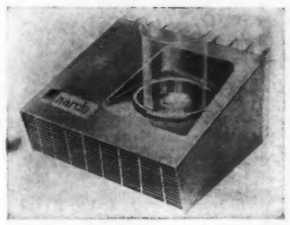
ULTRASONIC CLEANER
transistorized unit is low in price



Grease, oil, and all types of soils are removed from small instruments, relays, complex electromechanical devices, and other small parts by the Uni-Blast transistorized ultrasonic cleaner. Sound waves at 40,000 cps cause a cleaning action that does not harm fragile articles. Self-contained unit houses the generator and a recessed circular barium transducer in its base, upon which is placed a 400-ml beaker containing the cleaning solution. Operation is on 110-120 v. Price is under $100. • **Narda Ultrasonics Corp.**, 625 Main St., Westbury, L. I., N. Y.

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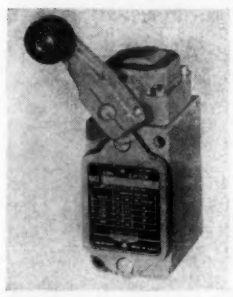
BALL TRANSFER
sizes and shapes to order

Manual transfer of parts and packages between conveyor lines or between machines is effected with this line of table-mounted ball transfers. Ball casters have 1 15/16, 3, or 4-in. spacing. Tables are furnished with angle or channel framing in sizes and shapes to meet requirements. Supports are to order. • **Conveyor Specialty Co.**, 33 Newport Ave., North Quincy, Mass.

▲ For more details circle NED-113 D on enclosed inquiry slip ▲

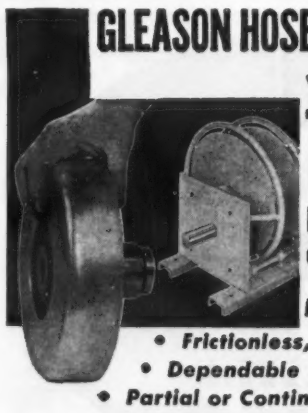
LIMIT SWITCHES
seals exclude oil, moisture, grit



Both surface and flush type mountings are available in this line of limit switches for high impact and adverse environmental condition installations. External and internal seals check the entry of oil, coolants, moisture, and abrasive grit. Contacts are enclosed, but kept visible through the use of a thermoplastic material. Any of 14 different operating heads, including pushbuttons, rollers, and levers, may be mounted in any of four positions 90 degrees apart. Rotary levers can be positioned anywhere in a 360-degree range. They offer a selection of clockwise, counterclockwise, or clockwise and counterclockwise operating sequences. • **Cutler-Hammer Inc.**, 574 N. 12th St., Milwaukee 1, Wis.

▲ For more details circle NED-114 D on enclosed inquiry slip ▲

GLEASON HOSE or CABLE REELS with TORMAG MAGNETIC COUPLING provide



- *Frictionless, Shockless Drive*
- *Dependable Controlled Torque*
- *Partial or Continuous Stall Operation*
- *Long Trouble-Free Service*
- *Lower Initial Cost*

Now Reel users can have the widest possible choice of drives for their Gleason Reels. Depending upon the duty cycle, Gleason can recommend the best reel drive—Spring Motor, Electric Torque Motor or Tormag Drive—and if you require several hoses and cables in the same carrier to supply air, liquids and power to equipment in motion, Gleason also has the Powertrak Carrier.

For The Complete Answer To All Your Problems of Supplying Air, Liquids, or Electric Power To Your Equipment In Motion, Write—

Representations In Principal Cities.
In Canada—Railway & Power Engineering Corp. Limited.

Gleason Reel Corp.

Dept. A, 800 Horicon St., Mayville, Wis.

SPRING REEL HEADQUARTERS FOR ALL INDUSTRY

▲ For more details circle NED-115 D on enclosed inquiry slip ▲

in new all-weather sanitary, tamper-proof "throw-away" dispensers of high impact styrene plastic

IN 2 sizes 500 Tablets 1000 Tablets Easily Put Up INDOORS OUTDOORS

"Pep-Up"® The Original and Highest Quality IMPREGNATED SALT TABLETS

- combat heat fatigue
- hold down hot weather accident rates
- help employees feel good and retain their vigor

Impregnated to Prevent "Salt Sickness". Each salt crystal individually coated to give slow, controlled dissolving, to prolong benefits and eliminate nausea.

Made and packaged by USSSCO under U. S. Patent No. 2,478,182

A SIZE AND PACKAGE FOR EVERY NEED

Select from list below. New all-plastic dispensers at no increase in price.

Item	Cat. No.
500 Tablets in Expendable Dispenser	1114
1000 Tablets in Expendable Dispenser	1124
1500 Tablets in Bulk Carton	1131
Carton, 24 "Vest Pocket" vials of 20 tablets each	1101

UNITED STATES SAFETY SERVICE CO.

1553 Walnut St., Kansas City 8, Mo.
Branches in Principal Industrial Cities
Canada: Parmelee, Ltd., Toronto & Montreal

▲ For more details circle NED-116 D on enclosed inquiry slip ▲

KEY® Graphite Paste, the tight sealing pipe joint compound, goes on easy, seals fast. It's ideal for oil, gas, and high pressure steam lines—safe for flammable liquids. (Listed under Re-examination Service of Underwriters' Laboratories, Inc.) Expands under heat — lubricates and protects threads while it seals. Speeds disconnecting — joints don't freeze.

Key Graphite Paste is applied with a brush—no crumbling or waste. Extra long open-can life eliminates thinning and stirring.

Available in the following sizes: ¼ lb. cans, Handy Dope Kit, 1 lb., 2¾ and 10 lb. cans, 30 lb. and 60 lb. buckets and 500 lb. drums.

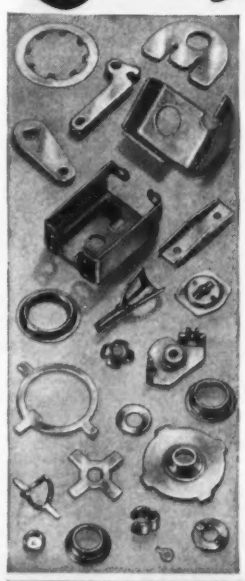
WRITE FOR CIRCULAR 240-B AND FREE SAMPLE

W-K-M DIVISION OF ACF INDUSTRIES INCORPORATED

Dept. Z-04, P.O. Box 2117, Houston, Tex.

▲ For more details circle NED-117 D on enclosed inquiry slip ▲

Quadriga® means Quality metal stampings



Quadriga specializes in the manufacture of custom-made stampings to close tolerances. Using the most advanced machinery and methods, Quadriga can provide the *exact* stamping required to fill your application—any metal, medium to high quantity runs. Depth of draw to 3½ inches—press. capacities to 150 tons.

Quadriga also manufactures custom-made flat, friction, tension and finishing washers as well as wire terminals in thousands of special sizes and shapes.

Send b/p or specs for estimate. Request catalog on your company letterhead.

® Reg. U. S. Pat. Off.

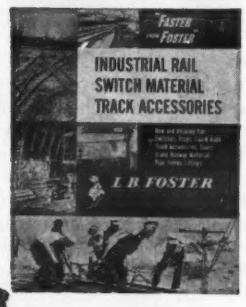
THE Quadriga MFG. CO.

221 WEST GRAND AVE. • CHICAGO 10, ILL.

▲ For more details circle NED-118 D on enclosed inquiry slip ▲

NEW!
TRACK MATERIAL CATALOG

INDUSTRIAL RAIL
SWITCH MATERIAL
CRANE RAIL
TRACK TOOLS & ACCESSORIES



For your free copy, write for catalog NE-4

L. B. FOSTER CO.
PITTSBURGH 30
NEW YORK 7
CHICAGO 4
HOUSTON 2
LOS ANGELES 8
ATLANTA 8
CLEVELAND 35

For additional help call the Foster Track Specialist nearest you.

Faster From Foster
RAIL • PILING • PIPE

▲ For more details circle NED-119 D on enclosed inquiry slip ▲

SEALMASTER® "L" SERIES

A HIGH QUALITY LINE OF MALLEABLE HOUSED BEARING UNITS AND BEARINGS AT A COST THAT IS WARRANTED ON YOUR MACHINE!

- SELF-ALIGNING
- ONE-PIECE MALLEABLE HOUSING
- PERMANENTLY SEALED
- EASY RACE TO SHAFT LOCK

Available in pillow blocks and two or three bolt flange units for flush or recessed mountings. All units in the "L" Series available with the new SEALMASTER contact type seal.

LP PILLOW BLOCK — LFT FLANGE UNIT — LF FLANGE UNIT

WRITE FOR BULLETIN 359

SEALMASTER BEARINGS
A DIVISION OF
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS
Plants Located in: Los Angeles, Calif. Clarksdale, Miss • Belleville, Ontario

SEALMASTER® BALL BEARING UNITS

▲ For more details circle NED-120 D on enclosed inquiry slip ▲

Another FIRST from
LINCOLN

ADJUSTS FROM HIGH TO LOW PRESSURE DELIVERY IN SPLIT-SECOND

DOUBLE-ACTION LEVER TYPE GREASE GUN

FAST MANUAL ADJUSTMENT from high to low pressure leverage is facilitated by built-in pin and dual slot. Minimum handle stroke of ¼" permits working in close quarters.

SWIVEL NOZZLE EXTENSION covers 360° arc, contacts hard-to-reach fittings easily.

LOADS 3 WAYS — with standard 14½ oz. grease cartridge . . . with Lincoln filler pump . . . or by suction.

DEVELOPS 10,000 P.S.I. This is enough pressure to "break" the tightest bearings.

PRECISION BUILT and quality-engineered for years of dependable service. All steel construction, satin nickel-plated.

Write for Bulletin 230 and get the full story.

Lincoln LINCOLN ENGINEERING CO.
4010 Goodfellow Blvd., St. Louis 20, Mo.
Division of The McNeil Machine & Engineering Co.

▲ For more details circle NED-121 D on enclosed inquiry slip ▲

WELDING PIPE FITTINGS
new sizes extend range to 1 to 6 in.

Eccentric style reducers are added to the Husky line of welding pipe fittings which includes 45 and 90-degree elbows, straight and reducing tees, and concentric reducers. Also added are 1, 1¼, and 1½-in. sizes to the previous 2 to 6-in. range. New fittings are also made from A-106 Grade B material and meet the same ASTM specifications as the other fittings. • **Nibco Inc.**, 500 Simpson St., Elkhart, Ind.

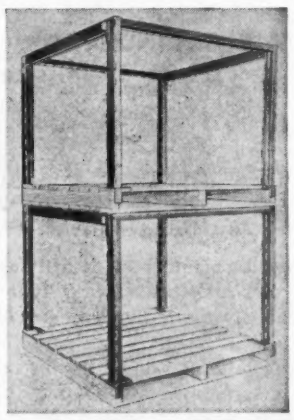
▲ For more details circle NED-122 D on enclosed inquiry slip ▲

AIR FLOW SILENCER
10 sizes have capacities to 500 cfm

Absorption type of filter for high velocity air and gas flow lines has a perforated air passage tube entirely enclosed by sound absorption material encased in the outer shell. Resistance to flow in the straight-through unit is about equal to an equal length of straight pipe. Welded-shell filter is suited for relatively moisture-free air or gas service at up to 210° F. Ten sizes with ½ to 4-in. female pipe connections on both ends have capacities up to 500 cfm. Applications include compressors, blowers, vacuum pumps, air motors, and air cylinders. • **Universal Silencer Corp.**, Libertyville, Ill.

▲ For more details circle NED-123 D on enclosed inquiry slip ▲

PALLET RACK HARDWARE
converts pallets to stackable racks



Loads up to 12,000 lb per stack are handled by standard pallets converted into stackable racks by Pallet Racker hardware. Components are quickly assembled to any pallet without fasteners, the Lock-Tight assembly biting into the pallet for strength. Assembled racks are handled by all types of lift trucks and dollies. Extra support bars enable each rack to be divided for handling several types of loads. Low cost units are quickly disassembled for flat storage in minimum space. • **Union Asbestos & Rubber Co.**, Sturdi-Bilt Material Handling Div., 332 S. Michigan Ave., Chicago 4, Ill.

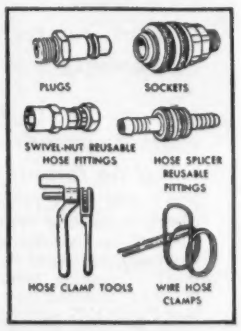
▲ For more details circle NED-124 D on enclosed inquiry slip ▲

STANDARDIZE ON LINCOLN for all your
air supply line accessories

Lincoln offers you one dependable source for a complete line of sockets, plugs, hose clamps, fittings, tools, regulators, lubricators, filters, auto-drains and air compressors (¼ HP to 20 HP). Lowest cost . . . newest design features . . . backed by 50 years' experience in pneumatics engineering.

Coast-to-Coast Sales and Service through 16 Branch Offices and Leading Industrial Distributors.

For more information, write today for Bulletins 227 and 228.



Lincoln LINCOLN ENGINEERING CO.
4010 Goodfellow Blvd., St. Louis 20, Mo.
Division of The McNeil Machine & Engineering Co.

▲ For more details circle NED-125 D on enclosed inquiry slip ▲

Stack-n-Nest® TOTE PANS

- Carry bigger payloads . . . tested to 3000 lbs. safe static load.
- Work efficiently . . . here are 373 pans nested in 13 sq. ft. of space, with room to spare.
- Stack high with perfect safety.
- Need no maintenance. These smooth, one-piece Fiberglass pans won't rust, dent, or burr out . . . unaffected by oil, water, and most chemicals.
- Stack and nest within their own dimensions without gadgets.
- In stock at Lewis . . . all sizes ready to ship to your order within 24 hours.

Patented 2,823,828 2,823,829

Widest range of sizes and colors . . . write for complete details TODAY!

G. B. *Lewis* COMPANY
404 MONTGOMERY STREET • WATERTOWN, WISCONSIN

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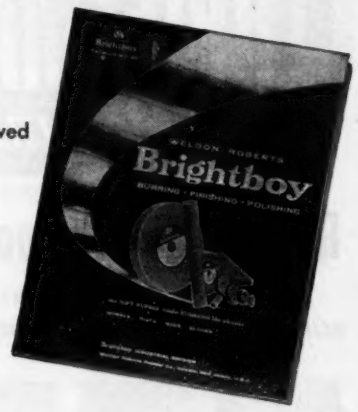
GET THE NEW, COMPLETE PICTURE

on MULTI-USE, SOFT RUBBER BONDED ABRASIVES —THE ONLY COMPLETE, COMPREHENSIVE STOCK LINE!

The revealing new medium for achieving bigger savings, improved product quality, in metal-working. The revolutionary new concept of abrasive uses!



Write for new Brightboy Catalog listing "job-matched" grains & textures; machine speeds, refreshing methods and applications.

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street
Newark 7, N. J.

America's Pioneer Manufacturer of Rubber-Bonded Abrasives

▲ For more details circle NED-127 D on enclosed inquiry slip ▲

NEW from *Lincoln* PORTABLE "NO-AIR" *Dyna-Spray* SYSTEM

. . . for better spray-coating at lower cost

Here is a hydraulic spraying method specially engineered for economical application of paints and other protective coatings —Lincoln's new "No-Air" Dyna-Spray System.

Simple and trouble-free, it requires no atomizing air, no heating of material. Less material is used, and no costly ventilating is required. The five-gallon unit is easily portable, will not tilt. System also available for dispensing from 55-gallon factory drum.

Write today for Bulletin 404-R, giving complete details on Dyna-Spray.

Lincoln LINCOLN ENGINEERING CO.
4010 Goodfellow Blvd., St. Louis 20, Mo.
Division of The McNeil Machine & Engineering Co.

▲ For more details circle NED-128 D on enclosed inquiry slip ▲

Both Flexaust hose and Portovent retractable duct are made of neoprene coated fabrics and wire reinforced, and have service-proven their dependability and durability in thousands of installations since 1938. Easy to cut, couple, connect, reuse, relocate, they can be installed in minutes to give years of service. Sizes from 1¼ to 36" i.d.

WRITE TODAY FOR DETAILS
"Distributors in all principal cities"
THE FLEXAUST COMPANY
Dept. NED-4 100 Park Avenue, New York 17, N. Y.

▲ For more details circle NED-129 D on enclosed inquiry slip ▲

THOMSON
THRIFTMASTER
DRILLHEADS

RUGGED to full tool capacity!

FOR LONG WORKING LIFE
ELIMINATE DOWNTIME & PRODUCTION LOSSES!

DRILL • TAP
REAM • BORE
COUNTER-SINK
COUNTER-BORE
FACE

Tremendous economies from the use of multiple-spindle drillheads are obvious. Use THOMSON THRIFTMASTER Drillheads for optimum performance and profits.

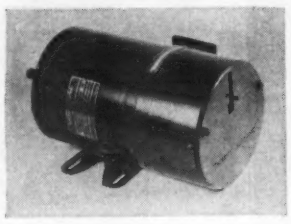
Ask NOW for our new catalog.

THRIFTMASTER PRODUCTS CORPORATION
1028 NORTH PLUM ST.
LANCASTER, PENNA.
EXpress 2-2101

Subsidiary of THOMSON INDUSTRIES, INC. makers of

▲ For more details circle NED-130 D on enclosed inquiry slip ▲

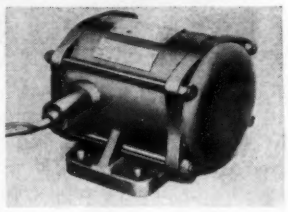
AC BRAKE MOTORS
sizes from ¼ through ¾ hp



Integral, one-piece design, Form G ¼ through ¾-hp alternating - current brake motors are offered in dripproof and totally enclosed, fan-cooled constructions. They can be used to power overhead doors, cutoff mechanisms, indexing mechanisms, machine tools, conveyors, and small elevators. The spring-set and solenoid-released magnetic brake sets automatically if power fails. Brake torque is 3 lb-ft continuous. All models are rated 208-220/440, 550 v, 1725/1425 rpm. The ½-hp model is also available in 1140/950 rpm. Dripproof model is rated 60/50 cycles, 40/50° C rise, whereas enclosed fan-cooled model is rated 55° C rise. • **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle NED-131 D on enclosed inquiry slip ▲

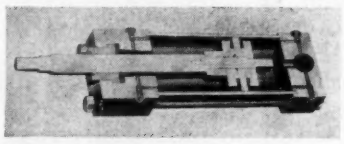
ELECTRIC VIBRATOR
vibration impact is variable



Stubborn materials can be moved through bins, chutes, and hoppers by the explosionproof, totally enclosed RC-32 vibrator, suited for use in atmospheres containing natural gas, gasoline, and other vapors. The Class I, Group D unit delivers 3600 vibrations per minute with 60-cycle current. Vibration impact is adjustable from 385 to 1100 lb in seven settings. The 9 x 8½ x 6-in. unit weighs 51 lb and is available in 220 or 440-v, three-phase alternating current models. • **Cleveland Vibrator Co.**, 2828 Clinton Ave., Cleveland 13, Ohio.

▲ For more details circle NED-132 D on enclosed inquiry slip ▲

AIR CYLINDERS
1½ to 14-in. sizes rated to 750 psi



High pressure ratings of standard Model A air cylinders have no effect on their low pressure operation; they cycle smoothly at as little as 2 psi. Entire line incorporates pressure sealing type seals, Teflon static seals, SHED tubing end seals, case hardened and chrome plated piston rods, rust resistant surfaces, and solid steel heads, caps, and mountings. Bores of 1½ and 2 in. are rated at 750 psi; 2½ in. at 500 psi; 3¼ in. at 750 psi; 4, 5, and 6 in. at 400 psi; 8, 10, 12, and 14 in. at 250 psi. • **Flick-Reedy Corp.**, Miller Fluid Power Div., York & Thorndale Roads, Bensenville, Ill.

▲ For more details circle NED-133 D on enclosed inquiry slip ▲

POSSONS PULL-BACK SAFETY DEVICES

For:
PUNCH PRESSES
TOGGLE PRESSES
PRESS BRAKES
EMBOSSING PRESSES
DROP HAMMERS

Pulls operator's hands out of danger if he forgets or if press repeats!

PULL-BACK ACTION is performed by steel-cored cables, fastened to wrist bands on the operator's hands. The pull-back is actuated by a multiplier (gear, rack and cam), connected by a rod to the press ram below any possible breaking point. For free aisle space, use beam or ceiling attached type. FREE CATALOG—Shows how POSSONS Safety Devices are applied to various types of presses. Engineering service available.

THE POSITIVE SAFETY MANUFACTURING CO.
4404 Perkins Avenue • Cleveland 3, Ohio • UTah 1-1878
In Canada: SAFETY SUPPLY COMPANY • Toronto, Ontario

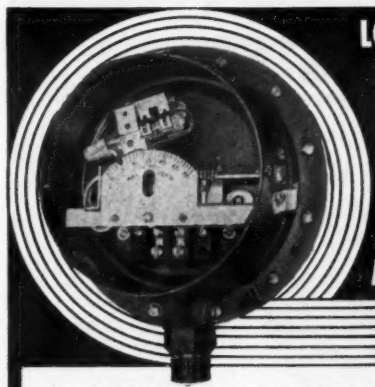
▲ For more details circle NED-134 D on enclosed inquiry slip ▲

NEW PERISTALTIC DISCHARGE VALVES
Solve Tough Material Handling Problems

New rubber diaphragm peristaltic valves designed and manufactured by the U.S. Hoffman Machinery Corp., make it possible to automatically discharge materials which can not be handled easily by conventional methods. These include catalysts, pellets and other odd-shaped and abrasive materials unable to pass through rotary valves. The peristaltic valve's elliptical body section and "sandwiching" of gum rubber diaphragms insure positive closure. Movement is confined solely to the diaphragms which alternately open and close by air pressure and vacuum. The peristaltic valve's *fail-safe* design feature is exclusive and patented by Hoffman. Should one of the diaphragms rupture, the other extends to the opposite side of the valve for complete and positive closure. A *double* valve assembly permits the discharge of materials in controlled quantities against high differential pressures with 100% air-tight seal. Each chamber has its own control and the entire operating sequence can be automatically timed. For free illustrated bulletin, write Dept. EJM, U.S. Hoffman Machinery Corp., Air Appliance Div., 103 4th Ave., New York 3

Advt.

▲ For more details circle NED-135 D on enclosed inquiry slip ▲



LOW PRESSURE CONTROL FOR GAS OR AIR

UL LISTED FM APPROVED

MERCOID

REAR PRESSURE CONN. ⅛" MALE I.P.S. WITH ¼" FEMALE I.P.S.
FRONT PRESSURE CONN. ⅛" FEMALE I.P.S.

Repetitive Trip Point
External Adjustments
Visible Calibrated Dial
Visible Contact

CAN BE USED THREE DIFFERENT WAYS

The Mercoid PG employs a diaphragm which actuates a mechanism for opening or closing a mercury switch. The diaphragm separates two pressure chambers, one of which may be used for positive pressure; the other for negative (vacuum) operation or both chambers may be used to provide operation due to a difference in pressures between them.

WRITE FOR BULLETIN PG

THE MERCOID CORPORATION
4211 Belmont Ave., Chicago 41, Ill.

▲ For more details circle NED-136 D on enclosed inquiry slip ▲

"Sounds for Safety"

save life & property with New Model Falcon®

• Simple visual inspection with new sight glass—added neatness of design.

No one can place a price on the possible loss of lives due to fire. But Falcon Automatic Fire Detectors & Systems can give early warning of fire to protect lives and guard property.

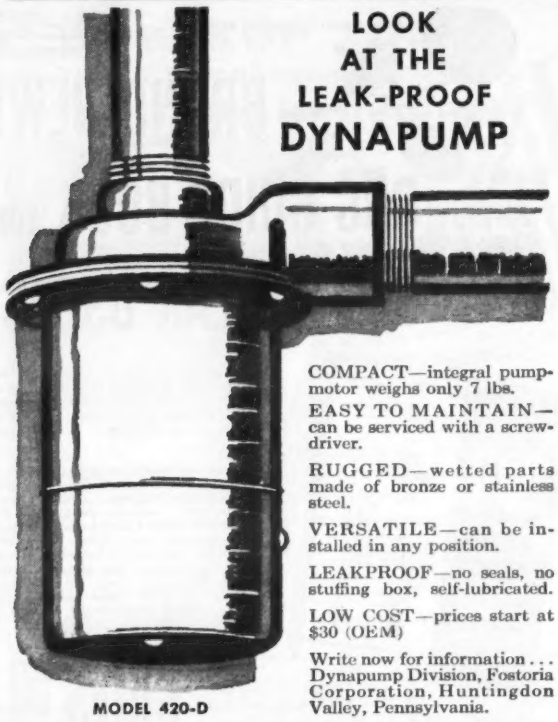
Falcon Automatic Fire Detectors & Systems are:
• LISTED BY U/L
• SELF-CONTAINED (no wires or batteries)
• FULLY GUARANTEED
... and they are low in cost!

WRITE for particulars — and free, informative "Sounds for Safety" folder! DEPT. ND

Falcon® ALARM CO., INC.
SUMMIT, NEW JERSEY

▲ For more details circle NED-137 D on enclosed inquiry slip ▲

LOOK AT THE LEAK-PROOF DYNAPUMP



MODEL 420-D

COMPACT—integral pump-motor weighs only 7 lbs.

EASY TO MAINTAIN—can be serviced with a screwdriver.

RUGGED—wetted parts made of bronze or stainless steel.

VERSATILE—can be installed in any position.

LEAKPROOF—no seals, no stuffing box, self-lubricated.

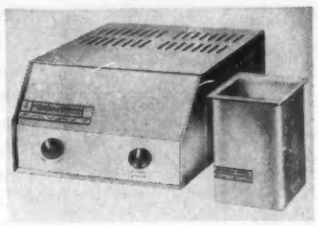
LOW COST—prices start at $30 (OEM)

Write now for information . . . Dynapump Division, Fostoria Corporation, Huntingdon Valley, Pennsylvania.

DYNAPUMP®

▲ For more details circle NED-138 D on enclosed inquiry slip ▲

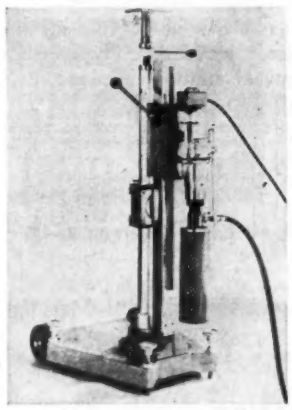
ULTRASONIC CLEANER
low price unit has ½-gal tank



Over 50 classes of soils and contaminants are disintegrated in seconds from a wide variety of products by the diSONtegrator System Forty ultarasonic cleaner. It includes a 40-w Model G-40C1 generator with an output of 90,000 cps; a 10 x 8 x 5¾-in. cabinet with a single push-pull activity regulation knob; and a 5¾ x 5¼ x 4-in. Model T-40C1 stainless cleaning tank. Operation is on 117 v, 50/60 cycle ac, with the tank filled with solvent or water and detergent. Equipment is offered in five colors. • **Ultrasonic Industries, Inc.**, 141 Albertson Ave., Albertson, L. I., N. Y.

▲ For more details circle NED-141 D on enclosed inquiry slip ▲

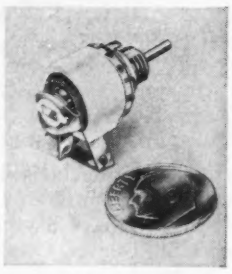
THIN-WALL MASONRY BITS
⅜ to 14-in. diameters offered



Drilling, coring, and testing operations in reinforced concrete, tile, asphalt, and other hard materials can be performed with two types of thin-wall masonry core bits. Surface set type in ⅜ to 14-in. nominal OD (resettable) and ½ to 6½-in. (non - resettable) sizes have sintered metallic matrix bonds that hold diamond crystals. Diamond impregnated type is available with standard and heavy concentrates in ½ to 6½-in. nominal OD. Both types hold their diameter within 0.005 in. for the life of the bit. Bit lengths are 6 and 14 in. They core at speeds up to 6 ipm and fit any machine. Tubing thickness ranges from 0.093 to 0.120 in., depending upon bit size. • **Hoffman Bros. Drilling Co.**, Cedar & Tiona Streets, Punxsutawney, Pa.

▲ For more details circle NED-142 D on enclosed inquiry slip ▲

5-WATT RHEOSTAT
operating temperature is 340° F



With a diameter of 0.5 in., this subminiature 5-w rheostat is smaller than a dime. It has good heat dissipating characteristics, and its small size offers flexibility in application. Rheostat operating temperature is 340° F, plus a built-in safety factor. • **Hardwick Hindle, Inc.**, 40 Hermon St., Newark 5, N. J.

▲ For more details circle NED-143 D on enclosed inquiry slip ▲

HIGH LIFT... HEAVY LIFT... OR BOTH!

PORTELVATOR®

ENGINEERED POSITIONING EQUIPMENT

PORTABLE or STATIONARY

manual or power operation

ANY KIND or DEGREE of MOVEMENT

manual or completely automatic controls

* Portelvator's mechanical power transmission design locks the top-plate by gravity in any attained position. Application of this transmission to multiple elevating screws provides unequalled safety.

IT'S A HAMILTON TOOL USE IT WITH CONFIDENCE

Write for FREE LITERATURE BATCH No. P-801

THE HAMILTON TOOL COMPANY
901 HANOVER STREET · HAMILTON · OHIO

▲ For more details circle NED-145 D on enclosed inquiry slip ▲

You Get Convenience and Economy with Johnson Bronze Bars

For your convenience, Johnson Bronze solid and cored bars are now stamped on each end with the exact size. This eliminates measuring stock and helps prevent errors—makes for quick inventory.

In addition, the ends are centered for ease and accuracy of machining. All the operator must do is set the chuck on the indented marks, take a 1/64" cut and he has the size bar indicated. This speeds machining, assures concentric parts. Also, Johnson bars are in the convenient 13" length—are easy to store and handle.

Johnson Bronze bars are available in over 400 stock sizes which gives you the opportunity of selecting the bar you need from a wide range of diameters. All of these advantages of Johnson Bronze bars add up to economy for you. They are quickly available from your distributor. Ask him for a folder which lists the range of sizes of cored, solid and hexagon bars or write Johnson Bronze Company, 580 S. Mill Street, New Castle, Pa.

Johnson Bearings

▲ For more details circle NED-146 D on enclosed inquiry slip ▲

FOR HOT BOLTS USE Thred-Gard Anti-Seize Compound

Prevents Seizing and Galling of Threaded Surfaces to 1200°F.

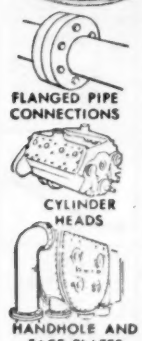
Power and Utility Service: boiler manhole, handhole and face plate studs . . . cylinder head and exhaust manifold studs . . . flange bolts on high temperature pumps, valves and steam lines.

Refinery and Chemical Service: flange bolts on pipe connections, autoclaves, reactors, kettles, pumps and valves . . . studs on "cat" crackers, heat exchangers, suction heaters, coolers and condensers.

Steel Mill, Forge and Foundry Service: soaking pit or ingot stripper crane assemblies . . . steel studs in magnesium and aluminum dies and forging dies . . . studs on furnaces and cooking ovens.

Available in ½ pint, pint and quart cans. Order a trial can today!

Request literature. Order a trial sample.



FLANGED PIPE CONNECTIONS

CYLINDER HEADS

HANDHOLE AND FACE PLATES

John Crane — MECHANICAL PACKINGS · SHAFT SEALS · TEFLON PRODUCTS · LAPPING MACHINES · THREAD COMPOUNDS

CRANE PACKING COMPANY
6411 OAKTON ST., MORTON GROVE, ILL. (Chicago Suburb)
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

▲ For more details circle NED-139 D on enclosed inquiry slip ▲

DELUXE

STORAGE CABINETS

Eight Exclusive Features

- Concealed hinges
- One size sheet metal screw (no bolts)
- Built-in locking handle
- Vertical corner reinforcement
- Offset back for strength
- Shelf load supported free of back
- Louvers for ventilation
- Domed bottom glides

Smartly styled executive line Deluxe cabinets feature smooth modern exterior and exclusive Chem-A-Cote° bonded baked enamel finish for life long service. Available in a choice of ten sizes and designs.

Royal METAL MANUFACTURING COMPANY
DELUXE METAL PRODUCTS CO. DIVISION WARREN • PENNSYLVANIA

▲ For more details circle NED-140 D on enclosed inquiry slip ▲

DELUXE

TEMPLA-FILE

saves 2,500 sq. ft. floor space

Templa-File provides a practical new time-saving system for filing and storing templates, patterns and similar hard-to-put-away items.

Templa-File has 24 free-sliding panels which can support 600 pounds each. Size 9'6" long, 7'3" high, 2'7" deep. Wt. 1500 lbs.

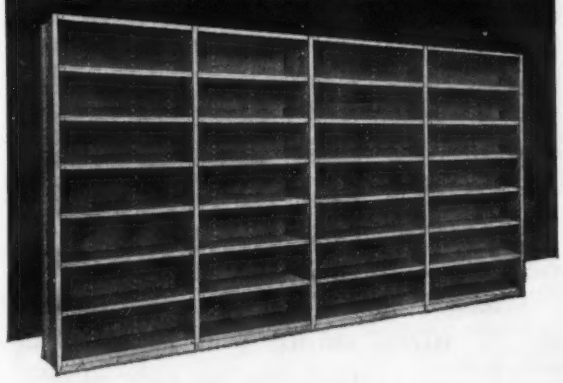
Royal METAL MANUFACTURING COMPANY
DELUXE METAL PRODUCTS CO. DIVISION WARREN • PENNSYLVANIA

▲ For more details circle NED-144 D on enclosed inquiry slip ▲

DELUXE

SHELVING

The Best You Can Buy!



Here's Why:

It's strongest: I-beam end-panel construction with box-lid type shelves and factory embedded reinforcing bars.

It assembles fastest: Patended boltless design permits assembly of regular section in less than five minutes.

It's tops in quality: All parts are smooth, with rounded edges, and paint is electrostatically applied.

Royal METAL MANUFACTURING COMPANY
DELUXE METAL PRODUCTS CO. DIVISION WARREN • PENNSYLVANIA

▲ For more details circle NED-147 D on enclosed inquiry slip ▲

FOR PROFIT

STANDARDIZE 100% ON SOUTHERN FASTENERS

It's a safe bet this man is enjoying a profitable operation because he uses Southern Screws. Southern fasteners are profit-partners in companies that use them because Southern quality, service, and packaging combine to help keep production lines operating at top speed without costly downtime, materials loss, injury, or rejects due to faulty fasteners. Southern are specialists in fasteners—make nothing else! Standardize on Southern Screws for profit! Send your next fastener order to Southern Screw Company, P. O. Box 1360, Statesville, North Carolina.

Manufacturing and Main Stock in Statesville, North Carolina
Warehouses: New York • Chicago • Dallas • Los Angeles

Machine Screws & Nuts • Tapping Screws • Wood Screws • Stove Bolts Carriage Bolts • Dowel Screws • Hanger Bolts • Drive Screws

▲ For more details circle **NED-148 D** on enclosed inquiry slip ▲

Engineered and Standardized to deliver Outstanding Performance

GENERAL PURPOSE BELT CONVEYERS

• Mathews General Purpose Belt Conveyers are furnished in a wide range of belt widths and section lengths. They can be assembled easily, for all parts are standardized and furnished from stock. The conveyers have several features which make them especially practical for the average package handling problem. The drive unit may be located at the end, or at any convenient point beneath the conveyer. End roller assemblies, takeups, and three-pulley devices are all standardized and easily installed.

Write for Bulletin G. P. 53 and Catalog 856 today.

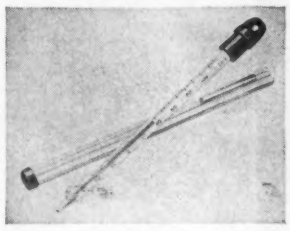
GENERAL OFFICES ..... MATHEWS CONVEYER COMPANY, Ellwood City, Pennsylvania
WESTERN DIVISION ..... MATHEWS CONVEYER COMPANY WEST COAST, San Carlos, California
CANADIAN DIVISION ..... MATHEWS CONVEYER COMPANY, LTD., Port Hope, Ontario, Canada

Over Fifty Years of Leadership in Mechanized Handling

MATHEWS

▲ For more details circle **NED-149 D** on enclosed inquiry slip ▲

POCKET THERMOMETER
resists mechanical, thermal shocks

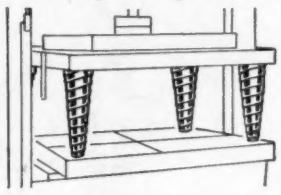


Numerals and graduations of the Gold Ribbon pocket thermometer are black-filled and magnified against a sealed-in yellow background on double-wing, flat reading surfaces. Ranges offered are −40 to 120° F, mercury filled, and −50 to 120° F, red spirit filled. Rubber cushioning the annealed glass thermometer tube renders the instrument resistant to mechanical and thermal shock. Price of thermometer in either range is $2.55. Refill tube is $1.70. • **Bacharach Industrial Instrument Co.**, 200 N. Braddock Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-150 D** on enclosed inquiry slip ▲

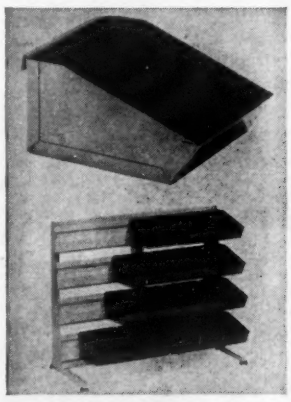
GUIDE PIN COVERS
one-piece type in unlimited lengths

One-piece guide pin covers made of tool steel are now available in unlimited lengths. These cone shaped, helically wound covers snap into place over pins and bushings to protect them from being nicked or scratched by feeding raw material. They also seal-in lubrication and close the pinch-point on a die set, protecting workers against injury. • **Central Safety Equipment Co.**, Elasticone Div., 6601 Marsden St., Philadelphia 35, Pa.



▲ For more details circle **NED-151 D** on enclosed inquiry slip ▲

PARTS TRAYS & STANDS
facilitate bench assembly work



Series of metal trays and bench stands in 18 and 36-in. widths facilitates small parts storage and bench assembly work. The gray enamel finished, welded steel stands have leveling adjustments and chrome buttons for easy sliding on bench area. Simtrays, measuring 2½ in. deep by 4½ in. long are made in five widths from 3 to 7 in. They hang from the stand rails and are easily interchanged to suit the job. For permanent use, wall mounting units are made in 18, 24, 36, and 48-in. lengths. • **Skyline Electronics, Inc.**, 1828 S. Bannock St., Denver, Colo.

▲ For more details circle **NED-152 D** on enclosed inquiry slip ▲

FLOOR WORRY FREE

WEAR PROOF rubber matting

SHAD-O-RUG

by America's 1st name in floor mats since 1903

- **Top quality ¼ inch heavy duty live rubber**
- **Choice of 6 smart decorator colors**
- **Low cost!**

48 inch width up to 60 ft. lgth.

Write for complete details—nearest distributor

Today's most popular rubber runner! Stops dirt at the entranceway or in corridors and aisles. Prevents tracking throughout the building. Protects carpeting and floors . . . cuts down maintenance time, labor and expense. Anti-slip action prevents accidents. Ultra-attractive design.

CROSS-RIB RUNNER Same top quality live rubber. Selection of smart colors. Functional design. Available in 36 and 48 inch widths—up to 60 ft. lgths.

Exclusive! Wear-Proof mats feature patented "V" rib design. Dirt is scraped off shoes by heavy duty blades with "windshield wiper" action—Dirt falls into slots, easily cleaned out later.

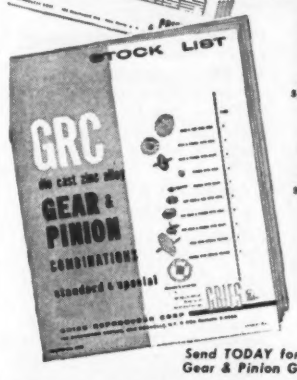
WEAR PROOF MAT CO. 2156 W. Fulton St. Chicago 12, Ill.

▲ For more details circle **NED-153 D** on enclosed inquiry slip ▲

Parts shown 3/5 actual size

25 years of progress in tiny parts

BRAND NEW!
GRC GUIDE BOOK for SMALL GEAR USERS



Full Specs for Hundreds of Combinations of One-Piece Die Cast Zinc Alloy—spur gears, gear clusters, pinions, cup gears—with hubs, shafts, spacers or special features—at little or NO tool cost.

If you use small gears and pinions it will pay you to keep this valuable guide book at your fingertips. It shows parts made by GRC's interchangeable unit die system and exclusive single cavity casting techniques: new design flexibility, new assembly shortcuts—reduced production and material costs. Maximum sizes: 1-5/16" O.D. by 1/16" face width—wider faces with smaller diameters.

Send TODAY for your GRC Gear & Pinion Guide Book.

GRIES

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y. • NEw Rochelle 3-8600

▲ For more details circle **NED-154 D** on enclosed inquiry slip ▲

YOUR SPECIAL CUTTING TOOL PROBLEMS ARE SOLICITED.

You are welcome to our 25 years experience in designing and producing Special Cutting Tools.

Submit your problem—with sample part, if feasible OR we'll manufacture to your specifications.

Thousands of Severance SPECIAL CUTTERS shipped monthly!

ASK FOR A QUOTATION TODAY!

Severance TOOL INDUSTRIES INC.
761 Iowa Ave., SAGINAW, MICH.
Ask for a Severance catalog today!

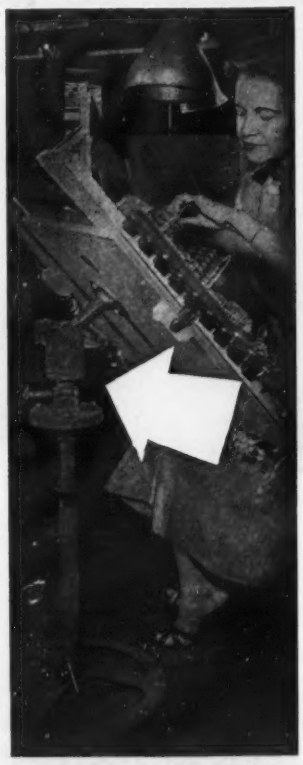
▲ For more details circle **NED-155 D** on enclosed inquiry slip ▲

POWRARM IN . . . PRODUCTION UP! UP! UP!

FRIDEN CALCULATING MACHINE CO. INCREASES WORKER EFFICIENCY WITH PowRarm! By using Wilton PowRarm Work Positioners as the basic unit of adjustable assembly boards, Friden increases production through a savings of operator time, motion, and assembly space. PowRarms allow 360 degree rotation of the new boards, and workers can incline them at various angles. May be mounted on benches, conveyors, or floor stands as illustrated. Many firms use PowRarm for inspection, servicing, soldering, assembly, and any work positioning operation. Ask your Wilton distributor for a demonstration.

WRITE FOR FREE 52-PAGE CATALOG!

Order Now From Your Stocking Industrial Distributor



WILTON
TOOL MFG. CO., INC.
Schiller Park, Ill.

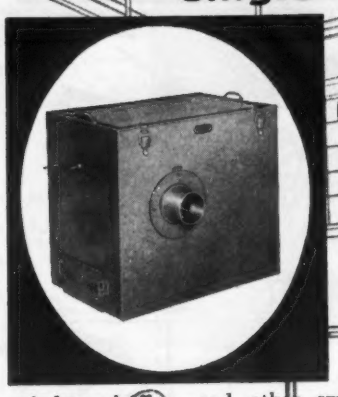
Sold by leading distributors the world over!

NED-40

▲ For more details circle **NED-156 D** on enclosed inquiry slip ▲

DUSTKOP "520"
designed to collect dust from single machines

portable — easily installed



DUSTKOP STOPS DUST

Self-contained Dustkop models, like the "520," are practical and effective in collecting dust from single machines. They're designed specifically for service with surface grinders, tool and cutter grinders, offhand grinders, buffers and other small wheel equipment. These units are also easy to install — are actually portable — and very economical to operate.

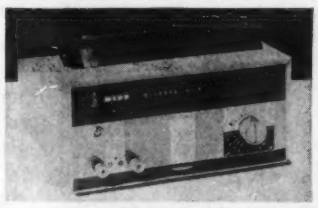
Write for illustrated literature
46 models to choose from!

NEW DUSTKOP AUTO SHAKER shakes filters AUTOMATICALLY

AGET manufacturing company
1396 E. Church Street, Adrian, Michigan
ask for details

▲ For more details circle NED-157 D on enclosed inquiry slip ▲

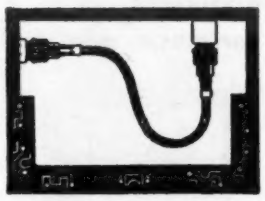
MULTIRANGE MICROAMMETER
measures both current and voltage



Advantages of a galvanometer are combined with those of a sensitive vacuum tube voltmeter in the Microva multirange microammeter which measures both current and voltage. Twenty measuring ranges adapt the instrument to a wide range of applications. It measures voltage from 0.5 mv to 15 v and current from 2 microamperes to 50 ma, accurate within 1 per cent of full scale deflection. Special frame is available for mounting instrument in standard 19-in. relay rack. • **James G. Biddle Co.**, Dept. 22, 1316 Arch St., Philadelphia 7, Pa.

▲ For more details circle NED-160 D on enclosed inquiry slip ▲

FLEXIBLE SHAFT ASSEMBLIES
standard units in 180 variations

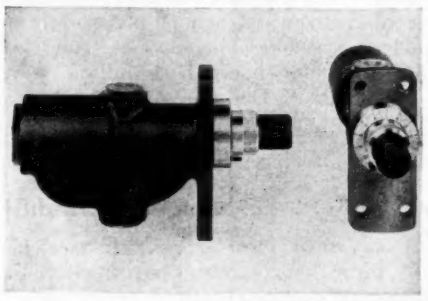


Over 180 variations of flexible shaft assemblies are available in the Circle Ess standard line. Assemblies are made up from stock components, affording savings in both cost and delivery time. They are not intended for replacement of special flexible shafts, but are useful as standard assemblies. • **F. W. Stewart Corp.**, 4311-13 Ravenswood Ave., Chicago 13, Ill.

▲ For more details circle NED-161 D on enclosed inquiry slip ▲

FLUID FLOW REGULATOR
for flows down to 35 cc per minute

Machine tools, air-oil cylinders, and other operations where rates of oil or fuel flow as low as 35 cc per minute must be controlled accurately are served by this



fluid flow regulator. Built-in check valve is adjustable for 2 to 90 cu in. per minute and provides free flow in reverse direction. Unit is designed for either panel mounting on test stands, or bracket mounted in piping systems. Inlet and outlet connections are ¼-in. NPT. • **Fluid Power Accessories, Inc.**, 2051 Railroad Ave., Glenview, Ill.

▲ For more details circle NED-162 D on enclosed inquiry slip ▲

INDUSTRIAL INKS To Mark Anything!

Whatever the substance, Phillips has an ink to mark it permanently and legibly—or can make one. Marking experts insist on "Clear Print" Wood Block Stamp Pads and Opaque Inks. They get clear, sharp, fast-drying impressions. Also inks for brush, pen, stencil or machine application available in a variety of colors and quantity containers.

★ Quick Laboratory Service On Your Problem Markings

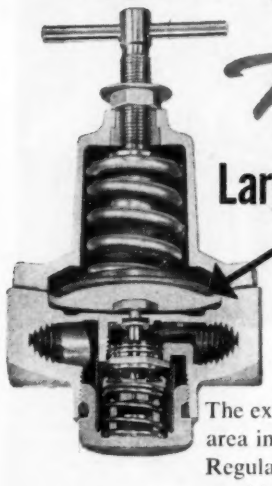
★ To Permanently Mark . . . Metals, Plastics, Glass, Wood, Paper, Leather, Ceramics—glazed, varnished or lacquered surfaces and virtually every other known material.

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
192 MILL STREET
ROCHESTER, NEW YORK

▲ For more details circle NED-164 D on enclosed inquiry slip ▲

All pressure regulators are not alike



Norgren

Large effective diaphragm area
provides closer pressure regulation

The extra-large effective diaphragm area in Norgren Pressure Regulators provides maximum sensitivity to fluctuating operating conditions. Regulator performance is better because a more stable regulated pressure is maintained over a wide range of operating circumstances.

Write factory for descriptive literature

C. A. NORGREN CO. FOUNDED IN 1926
3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

▲ For more details circle NED-158 D on enclosed inquiry slip ▲

The Solves **uni/RAP®** 3 Trap Problems

Faster Warm-Up
The large main orifice of the Unitrap's patented Dual-Valve quickly discharges air and condensate and permits live steam to enter faster and thus speeds warm-up.

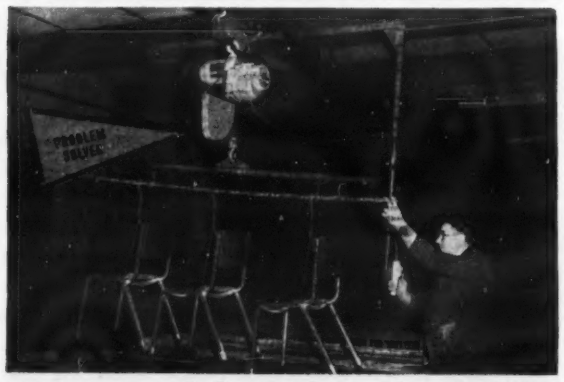
Greater Capacity
The almost instantaneous discharge of air and condensate tremendously increases capacity.

Trap Expense
The Unitrap automatically adjusts to variations in line pressure from 0 to 250 lbs. without changes or adjustments. This saves on maintenance and greatly reduces trap and parts inventory. You order by pipe size only—½" through 2".

For full information write for Bulletin 800 D.

PERFECTING SERVICE COMPANY, 322 Atando Ave., Charlotte, N. C.
Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland—Los Angeles
New York—Providence—Montreal—Toronto

▲ For more details circle NED-165 D on enclosed inquiry slip ▲



99-hour week for Budgit® Electric Hoist

Star Machine Company, Spring Lake, Michigan, keeps this Budgit Push Button Electric Hoist on 18-hour service over plating tanks 5½ days a week. Metal stampings are dipped into 11 tanks by the hoist operator. Fast push-button action permits 12 "jogs" a minute — terrific abuse for any small electric hoist, regardless of the application.

Star Machine gets continuous plating service with a complete push-button hoist installation that cost no more than $500. To learn more about this fast, tough, two-brake P:B Budgit Electric Hoist, write for Bulletin 15010-15C — or ask your nearby Shaw-Box Distributor for a free demonstration.

60A-4

BUDGIT ELECTRIC HOISTS
A product of
MANNING, MAXWELL & MOORE, INC.
Shaw-Box Crane & Hoist Division • Muskegon, Michigan
In Canada: Manning, Maxwell & Moore of Canada, Ltd., Galt, Ontario

▲ For more details circle NED-159 D on enclosed inquiry slip ▲

2,500,000 lb. stock handled by 3-TON LOAD LIFTER® CRANES

In and out transfers of pipe, sheets, tubing, and rods are made in a continuous simultaneous process at the 300-foot long Cleveland warehouse of The American Brass Company.

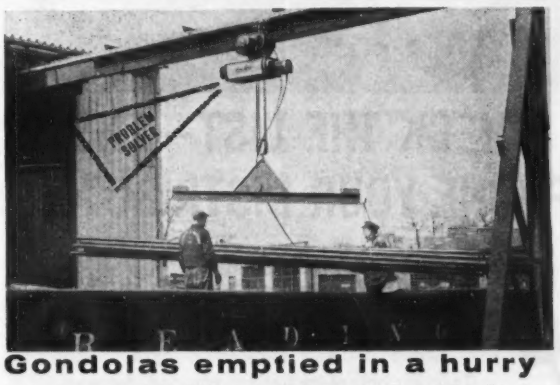
Movement of stock from and to four trucking bays takes minutes in contrast to hours for the same operations at the old warehouse. Four Load Lifter Cranes carry the material to any storage area. By coupling two cranes, 100 foot bay-to-bay transfers can be made fast and easily. They are floor operated cranes with push button control — cranes that eliminate dangerous man-handling and cut costs.

Whatever your problem in overhead load handling, ask your Shaw-Box Distributor for counsel. Or, write for Bulletin 15005-5A.

60 J-2

OVERHEAD CRANES FOR ALL INDUSTRY
A product of
MANNING, MAXWELL & MOORE, INC.
Shaw-Box Crane & Hoist Division • Muskegon, Michigan
In Canada: Manning, Maxwell & Moore of Canada, Ltd., Galt, Ontario

▲ For more details circle NED-163 D on enclosed inquiry slip ▲



Gondolas emptied in a hurry by Load Lifter® Electric Hoist

Bundled pipe arrives piled in the freight cars in layers separated by spacers. It is easy to loop slings over the bundle ends for attachment to the beam on the Load Lifter Hoist.

Lifting is fast at the push of a button. Horizontal travel is no problem either. The motor-driven trolley quickly takes the loaded hoist inside. Here the hoist switches to a single girder crane bridge and the load is deposited in a storage rack tagged for the size of pipe being handled. Time and effort are saved; demurrage charges are avoided.

Load Lifter Electric Hoists can cut costs and speed handling for you. Capacities: ½ to 15 tons. For details, phone your nearby Shaw-Box Distributor. Or write for Bulletin 15025-1C.

60 F-3

LOAD LIFTER ELECTRIC HOISTS
A product of
MANNING, MAXWELL & MOORE, INC.
Shaw-Box Crane & Hoist Division • Muskegon, Michigan
In Canada: Manning, Maxwell & Moore of Canada, Ltd., Galt, Ontario

▲ For more details circle NED-166 D on enclosed inquiry slip ▲

air and steam pipelines are now cleaned without filters

Today you add months of service life to air and steam equipment without increasing maintenance. Hi-eF Purifiers clean pipelines without the use of a troublesome filter element that needs frequent replacement. Yet these absolutely maintenance-free purifiers deliver the cleanest, driest air and steam possible.

BULLETIN 503 tells the remarkable story of the Hi-eF Purifier design. Write.

THE V. D. ANDERSON CO. 1988 W. 96th St., Cleveland 2, Ohio
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION

▲ For more details circle NED-168 D on enclosed inquiry slip ▲

- color code enamels
- marking enamels
- ASA machinery gray enamels
- wrinkle finishes
- high-heat aluminum
- zinc chromate primer
- gray primer-surfacer

CHECK LIST

Which of these self-spraying products can you use?

- open gear and wire rope lubricant
- light oil lubricant
- penetrating oil
- dry graphite lubricant
- all-purpose silicone lubricant
- clear plastic
- silicone mold release
- red insulating varnish-enamel
- battery terminal protector
- blue layout fluid
- layout fluid remover
- anti-rust spray
- electric motor degreaser
- engine degreaser
- Jet-Pak self-powered spray gun

CHECK THE LIST—THEN PHONE YOUR DISTRIBUTOR!

Single brand—single source

ONE CALL—THAT'S ALL!

The first **complete** line of industrial aerosols—your key to "push-button maintenance." Stocked and sold only by industrial distributors to give you quick service! Phone your distributor today for free handbook of 47 different maintenance and production aids in self-spraying containers—the better, faster, safer, cleaner, easier way to do a hundred jobs! Made by the oldest and leading custom-loader of aerosol specialties. If your distributor cannot supply you, write **Industrial Supply Division, Sprayon Products, Inc., 2063 East 65th Street, Cleveland 3, Ohio.**

Sprayon AEROSOLS FOR INDUSTRY

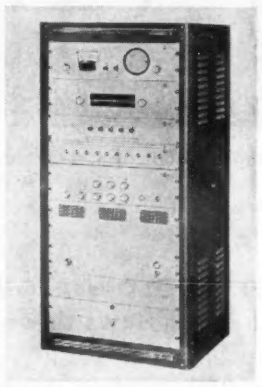
▲ For more details circle NED-169 D on enclosed inquiry slip ▲

HYDRAULIC PRESSES
in 25 and 40-ton capacities

Wide variety of heavy-duty industrial press work is handled by 25 and 40-ton capacity electrically powered hydraulic presses. Power package, consisting of a pump, 220/440-v three-phase 60-cycle motor, and switch, is rated 25 per cent duty cycle at full load and 50 per cent at ¾ load. Model HP-25-E22 has a 2-hp motor, with ram speed of 28 ipm at no load and 12.2 ipm at full load. Also equipped with 2-hp motor, 40-ton Model HP-40-E22 has equivalent ram speeds of 17 and 8 ipm. • **American Chain & Cable Co.**, ACCO Equipment Div., York, Pa.

▲ For more details circle NED-170 D on enclosed inquiry slip ▲

SOUND SYSTEM COMPONENTS
custom-assembled for music, paging

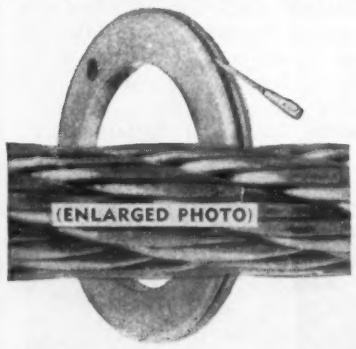


Components in the custom sound line of rack-mounted equipment can be built up from a simple paging system to a combination music distribution and general paging system. Latter could include multiple microphone inputs, automatic muting of music while paging, and emergency priority on microphone channels — all installed in a simple rack. Compatible components include an ac power panel, relay panel, input panel, AM-FM tuner, monitor panel, output panel with 10 switches and 20 outlets, four-speed record changer and/or tape player, preamp panel, amplifiers, speakers, microphones, and the basic rack. Any combination can be installed. • **Webster Electric Co.**, Clark & DeKoven Avenues, Racine, Wis.

▲ For more details circle NED-171 D on enclosed inquiry slip ▲

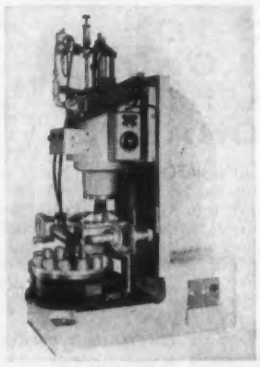
FISH TAPE
will not gouge aluminum conduit

Flexible qualities of Flexi-Strand fish tape facilitate pushing it through successive sharp bends in a long run of aluminum conduit. It cannot cut or gouge. Made of round preformed galvanized aircraft cable, it takes extreme flexing without kinking or taking a set. Tape is offered on a reel, with a handle, or separately, in 50 and 100-ft lengths capable of withstanding a 1500-lb pull. A large eye accommodates twenty No. 14, fifteen No. 12, ten No. 10, four No. 8, or three No. 6 wires. • **Ideal Industries, Inc.**, 1032 Park Ave., Sycamore, Ill.



▲ For more details circle NED-172 D on enclosed inquiry slip ▲

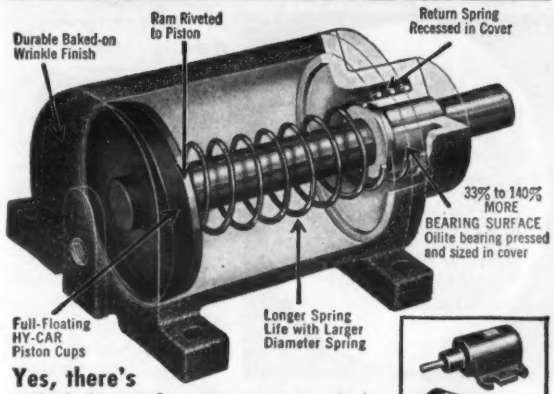
HOT STAMPING PRESS
foil tape prints in any color

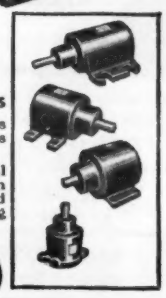


Plastics, leather, paper, wood, and composition materials can be imprinted, impressed, or marked with this hot stamping press. It uses foil tape to print in any color. Electronic dwell control, automatic foil feed, thermostatic control, stroke adjustment, and pressure up to 4800 lb are incorporated. Pneumatic control is standard and hydraulic control is optional. Hot stamping head is available separately for custom installations. It is adaptable to any standard punch press. • **Ideal Stencil Machine Co.**, 102 Iowa Ave., Belleville, Ill.

▲ For more details circle NED-173 D on enclosed inquiry slip ▲

A $32.90 Air Cylinder Can Save You thousands of dollars!





Yes, there's no doubt that simple, spring-return air cylinders are cheaper to start with, and use only half as much air as double-acting cylinders. The valves and hookups are simpler and cheaper, too.

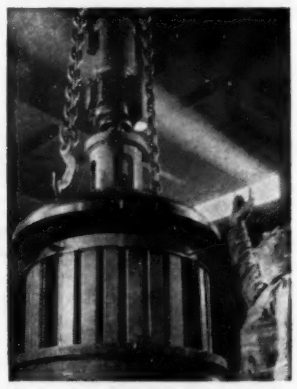
What's more, MEAD distributors carry local stocks for *immediate* delivery in six bores from 1" to 6", six stroke lengths from ½" to 3", and three mountings. Write now for single-acting cylinder catalog 1240.

MEAD

SPECIALTIES CO., 4114 N. Knox, Dept. 1240, Chicago 41, Ill.

▲ For more details circle NED-174 D on enclosed inquiry slip ▲

Wiped film evaporator handles tough jobs



If you evaporate products that are *heat sensitive, highly viscous,* or *low in thermal conductivity,* take a look at the Pfaudler Wiped Film Evaporator.

Key to its efficiency is the *mechanically wiped* evaporating surface that works like this: Centrifugal force of an internal rotor (pictured above) holds four free-floating wipers in contact with the heated wall. These wipers spread your product over the entire surface in a *thin, uniform film.* Slots in each wiper prevent product "curl" and accelerate it down and off the wall—very important with viscous and heat-sensitive materials.

Wiping also assures complete wetting of wall—no channelling—no hot spots—optimum efficiency for full utilization of heat-transfer area.

TEST YOUR PRODUCT IN OUR LAB. Then, choose the proper size production unit.

MORE DETAILS by writing to our Pfaudler Division, Dept. NED-40, Rochester 3, N. Y.

PFAUDLER PERMUTIT INC.
Specialists in FLUIDICS . . . the science of fluid processes

▲ For more details circle NED-175 D on enclosed inquiry slip ▲

Franklin NEW GEAR-O-MATIC MOTORS for . . .

An instant-reversing, geared motor controlled by built-in adjustable limit switches . . . and featuring an automatic safety device which instantly reverses the motor rotation when a predetermined force resists the motion of the driven product.

√ INSTANT, HI-TORQUE REVERSING
√ MANUAL OR FULLY AUTOMATIC
√ WORM GEAR REDUCTION

- GARAGE DOORS
- VENTILATORS
- INDEXING TABLES
- SLIDING DOORS
- MACHINE TOOLS
- REMOTE VALVES
- LOUVERS
- FACTORY GATES
- HEAVY CURTAINS
- DUMB WAITERS
- CONVEYORS
- MONORAIL UNITS
- FARM GATES
- X-RAY EQUIPMENT

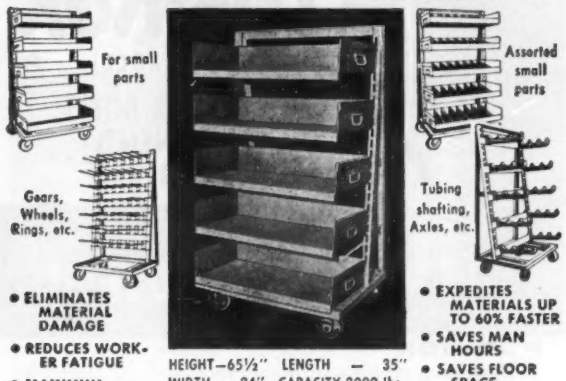
Write for "FACTS ABOUT GEAR-O-MATIC®"

FRANKLIN ELECTRIC
Franklin Electric Co., Inc.
BLUFFTON, INDIANA

▲ For more details circle NED-176 D on enclosed inquiry slip ▲

THE VER-T-RACK

THE ACME OF VERSATILITY



- ELIMINATES MATERIAL DAMAGE
- REDUCES WORKER FATIGUE
- MAXIMUM EFFICIENCY AT MINIMUM COST

HEIGHT—65½" LENGTH — 35"
WIDTH — 24" CAPACITY 2000 lbs.

- EXPEDITES MATERIALS UP TO 60% FASTER
- SAVES MAN HOURS
- SAVES FLOOR SPACE
- GREATER SAFETY FACTOR

Equipped with 6" roller bearing steel wheel casters

VER-T-RACK can be handled with lift truck.
Trays are adjustable on **VER-T-RACK**

PRICE — $49.50 Varied Accessories Extra

Slightly higher west of the Rockies Write today for descriptive literature

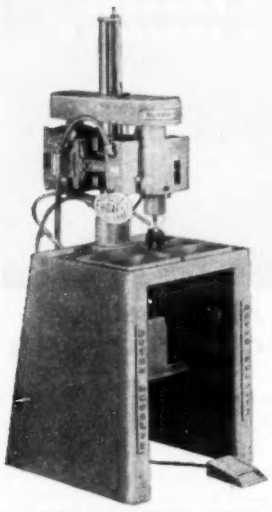
THE Vince BASNIK COMPANY
MATERIAL HANDLING DIVISION
• 2020 CENTER STREET • CLEVELAND 13, OHIO

▲ For more details circle NED-177 D on enclosed inquiry slip ▲

Lead Screw TAPPING MACHINE

by

Boyar-Schultz



A general purpose tapping machine designed for fast, accurate, lead screw tapping. Sturdy, flexible design assures precision work through long runs.

NOTE THESE OUTSTANDING FEATURES

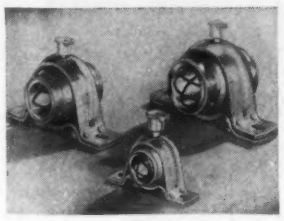
Positive drive and positive reversal. • Three speed timing belt. • Special 1 H.P. 220 or 440 Volt motor with very high reversing capacity. • Tapping stroke length controlled by external screw adjustment. • Large 1⅞" diameter lead screw of hardened bearing steel, with precision ground thread • Wear compensating, (jam free) lead screw nut. • Elevating screw to raise and lower tapping head. • Positive drive from spindle to tap. • Taps positioned in precision collects. • Foot pedal controls automatic tapping cycle, leaving hands free for work or fixtures.

BOYAR-SCHULTZ CORPORATION
2030 South 25th Avenue, BROADVIEW, ILLINOIS

▲ For more details circle NED-178 D on enclosed inquiry slip ▲

PILLOW BLOCKS

strap type have low silhouette



Two-bolt mounting arrangement of three series of strap type pillow blocks automatically draws the cap into proper adjustment against the base. The compact, low silhouette units are suited for normal duty OEM and replacement use. All incorporate a self-lubricating, self-aligning Deep Well ball assembly. Series 1440, 1540, and 1640 pillow blocks are offered in a variety of sizes. • **Randall Graphite Bearings, Inc.**, Greenlawn Avenue & Lake Street, Lima, Ohio.

▲ For more details circle NED-180 D on enclosed inquiry slip ▲

FORCE GAGE

with capacity of 14,000 grams

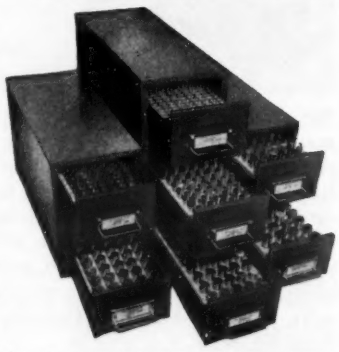
This 14,000-gram capacity force gage is provided with six stainless-steel attachments for measurement of compression and tension forces. Gage uses a compensated spring mechanism and dial indicator with 140 divisions, accurate within ½ per cent full scale. Maximum dial reading can be held for measuring transient loads or taking difficult-to-read measurements. Gage is housed in a steel case with black wrinkle finish. • **Hunter Spring Co.**, 1 Spring Ave., Lansdale, Pa.

▲ For more details circle NED-181 D on enclosed inquiry slip ▲

PRECISION PIN GAGES

in all sizes from 0.030 to 0.750 in.

Precision ground, heat treated pin type gages are available in all sizes from 0.030 to 0.750 in. in increments of 0.001 in. Pins are ground to tolerance of ±0.00005 in. Line comprises 721 sizes which serve well over 90 per cent of all needs. Pins can be reversed when worn. They are available individually or in sets, and special sliding drawer steel cabinets are available free with complete or sectional sets.



• **Dundick Tool Works, Inc.**, 3410 W. 31st St., Chicago 23, Ill.

▲ For more details circle NED-182 D on enclosed inquiry slip ▲

YOUR BEST MOVE IS TO MOVE WITH

MERRILL

MATERIAL HANDLING DEVICES FOR THE MOST IN *Safety and Economy*

Imitated, but never duplicated, Merrill Lifting Clamps are Drop Forged to give you Safety in Handling and Economy in Operation.

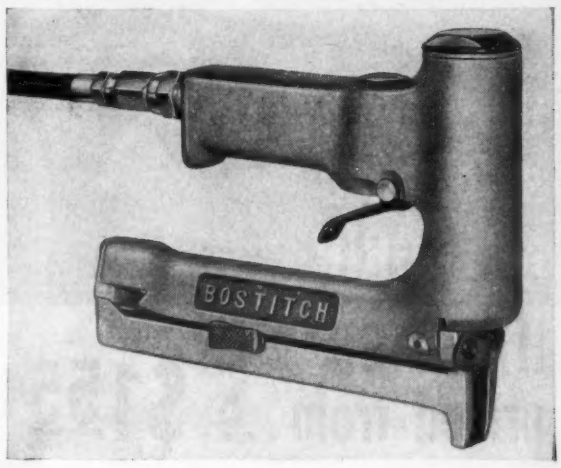
Over 25 Material Handling Devices described in our catalog C-2.
Ask for a copy.

HORIZONTAL PLATE CLAMP
Rated capacity — 3 ton (6 tons per pair). Completely drop forged . . . Heat treated.

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.
1-60A

▲ For more details circle NED-183 D on enclosed inquiry slip ▲

new low-pressure BOSTITCH T21 AIR TACKER operates on 20 p.s.i.



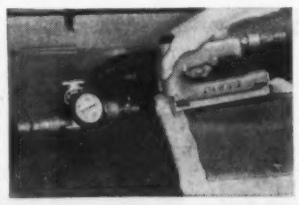
Low-pressure, high-speed Bostitch T21 for hard-hitting air stapling with as little as 20 p.s.i. on many tacking jobs. Operating range from 20 to 90 p.s.i. permits use of the exactly correct pressure. Balancing pressure to job cuts recoil and tacker wear, reducing costly down time and operator fatigue. Low pressure cuts operating expense.

You can increase production capacity. Convert to a larger number of low-pressure Bostitch T21s on your present air system.

TWO WIRE SIZES

.025" round wire staples — low cost with penetrating and holding power often superior to comparable flat wire.

.050" x .019" staples — two magazines provide quick change-over to staple lengths from 3/16" x 9/16".



"Test Drive" Demonstration
A Bostitch Economy Man will set up a T21 with pressure regulator and gauge in your plant. Circle our number on the Reader Service Card.

Fasten it better and faster with

BOSTITCH
STAPLERS AND STAPLES
684 Briggs Drive, East Greenwich, R. I.

▲ For more details circle NED-184 D on enclosed inquiry slip ▲

Yale low-cost electrics

in the 2000-3000-lb. capacity range are saving time and money for industry every day. Delicate maneuvering and deft handling are especially easy with this truck, for the mechanically actuated carbon pile speed control permits close-in inching and infinite speed variation. Twin-caster steer wheels make steering effortless, and easy right-angle turns in narrow aisles sharply increase storage space, cut stacking time. This truck saves maintenance overhead and "down-time" due to a minimum of moving parts and an economical powerplant.

For full information, call your Yale representative, or send for free brochure #5265 to The Yale & Towne Manufacturing Co., Materials Handling Div., Phila. 15, Pa., Dept. KT7.

YALE
INDUSTRIAL LIFT TRUCKS
TRACTOR SHOVELS • HOISTS
YALE & TOWNE

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Co. Manufacturing Plants: Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. Products: Gasoline, Electric, Diesel and LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Industrial Tractor Shovels • Hand, Air, Electric Hoists

▲ For more details circle NED-179 D on enclosed inquiry slip ▲

TWO soldering temperatures save time, add convenience and increase tip life!

Weller®

DUAL HEAT

SOLDERING GUN

Not only do heat and spotlight come on instantly when trigger is pulled, but 2 trigger positions give low 90-watt and high 125-watt heat. Switch instantly to the heat the job requires. Use high heat only when necessary. New, long-life tip utilizes copper for superior heat transfer and iron plating for durability. Weller Soldering Guns are available with dual and single heat, and from 90 to 275 watts. Priced from $6.44 to $14.95 list.

Order from your Distributor or write direct for catalog.

WELLER ELECTRIC CORP. 601 Stone's Crossing Rd. Easton, Pa.

▲ For more details circle **NED-185 D** on enclosed inquiry slip ▲

the new nylon soft-faced NYLOGRIP HAMMER priced from.... $1.55

Compare this new, soft-faced Nylogrip hammer with any you have ever used. Check these features — then check the price.

EXCLUSIVE WITH NYLOGRIP:

Extra rugged Nylon 6 Tips — job tailored to your needs. Screw on, off in seconds. Longest-lasting tips you'll find.

Solid steel head — heft and durability where you need it.

True-balanced wood handles — just naturally feel right without extra weight or loss of safety.

A hammer for every need — no less than 6 weights, sizes!

Lower cost — price is best news of all — as low as $1.55 postpaid!

Use this handy coupon or your own purchase order form.

NYLOGRIP PRODUCTS 568 Pleasant St., Watertown, Mass. WA 6-0100

Send checked items to:

NAME: _____

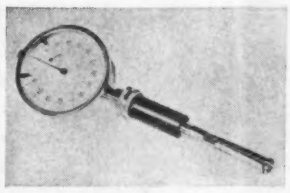
ADDRESS: _____

Quantity	Hammer Model	Weight Lbs.	Price	Replacement Tips Per Pair
	150	¼	1.55	.60
	200	½	1.70	.60
	300	¾	2.55	1.20
	400	1	2.85	1.20
	600	1½	4.20	1.65
	1000	2¼	7.10	3.70

QUANTITY DISCOUNT:
1-4 hammers...Net — 5-10 hammers...10% — 11 & over...15%
Applies to any assortment of weights.

▲ For more details circle **NED-186 D** on enclosed inquiry slip ▲

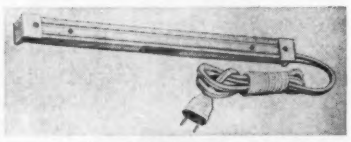
BORE GAGES
check out-of-round and taper



Addition of No. E-0 Dialtest small bore gage with a range of 0.047 to 0.062 in. enables the complete line of five models to overlap in a 0.047 to 1.130-in. range. Line also includes new No. E-161 gage with a range of sizes from 1/16 to ⅜ in., in increments of 1/16 in. Gages are accurate to 0.00008 in. for checking out-of-round, taper, incomplete bores, and other variations. Accessories include right angle attachment, extension rods, depth adjusters, and checking stand. Special measuring heads in EBF Series will check flush to the bottom of closed holes. • **Foster Supplies Co.**, 6122 Milwaukee Ave., Chicago 46, Ill.

▲ For more details circle **NED-187 D** on enclosed inquiry slip ▲

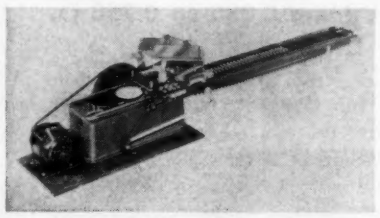
CONTINUOUS LENGTH RECEPTACLE
in lengths from 1 to 10 ft



A continuous electrical outlet for plugging in portable tools, lamps, small appliances, soldering irons, and other equipment the full length of a work bench is provided by the Tap-A-Line. This wall-mounted receptacle is made in lengths from 1 to 10 ft and is engineered to grip plugs securely. Load is limited to capacity of the No. 16 connecting wire. Strip within the receptacle is equal in capacity to No. 12 wire. • **Tap-A-Line Mfg. Co.**, 31 S. W. Fifth Court, Pompano Beach, Fla.

▲ For more details circle **NED-188 D** on enclosed inquiry slip ▲

AUTOMATIC CYLINDER PRINTER
prints trade marks on any surface

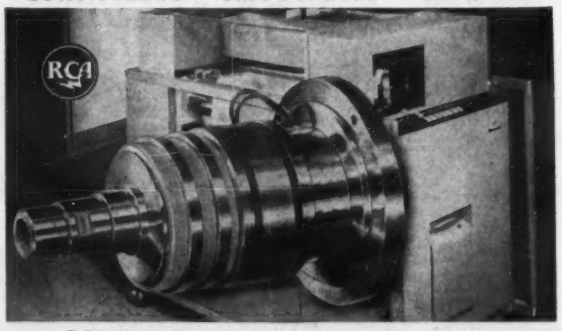


One or two color decorations, trade marks, or illustrations are printed on almost any surface — plastic, glass, metal, wood, or cardboard—by the Apex automatic cylinder printer. With an automatic hopper feed and conveyor takeoff, 2500 pieces per hour can be printed. Machine adjusts rapidly to different sizes and prints one or more lines at the same time on a portion of, or the complete surface. Typical of products this bench unit will print on are pens, pencils, jewelry, woodenware, paper or cardboard tubes, electronic components, pharmaceuticals, and similar objects. • **Apex Machine Co.**, 14-13 118th St., College Point 56, N. Y.

▲ For more details circle **NED-189 D** on enclosed inquiry slip ▲

RCA Selects Simplatrol Electric Clutch Brake

CONSISTENCY — SMOOTHNESS — QUIETNESS



R.C.A. 501 Data Processing System — Electro-mechanical Printer

These are the reasons that R.C.A. engineers gave for selecting a Simplatrol CB-62 electric clutch-brake unit for use in its new electro-mechanical printer.

In this high speed application, the Simplatrol unit feeds the paper — and indexes it accurately for printing. Specially developed in cooperation with R.C.A. engineers, the Simplatrol unit gives "remarkable consistency".

In the tape drive section of the unit, the Simplatrol clutch-brake delivers a smoothness and quietness not previously available, and so necessary in business machines.

Ask for Simplatrol literature and adaptation data.

Simplatrol products corp. 24-6 SALISBURY ST., WORCESTER, MASS.

93-0 *Representation in Key Industrial Areas*

▲ For more details circle **NED-190 D** on enclosed inquiry slip ▲

POR-ROK

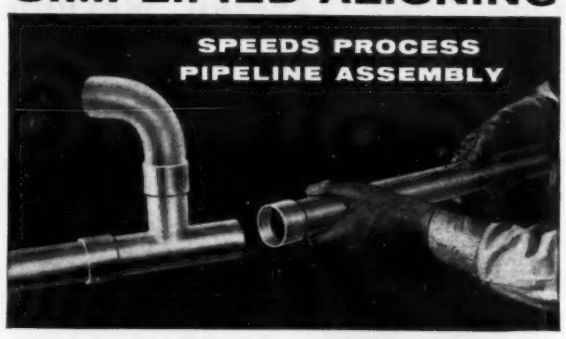
1. Fastens anything into concrete—PERMANENTLY—in minutes
2. Lowest cost
3. Mixed with water and poured into place
4. Applied cold
5. Self-leveling, self-bonding, oil resistant, never shrinks
6. Compression strength 4,500 psi in 1 hour

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

▲ For more details circle **NED-191 D** on enclosed inquiry slip ▲

SIMPLIFIED ALIGNING



Speedline® ALIGNING CONNECTORS

- **Fit right over ends of pipe and fittings**
- **Permit *pre-assembly* prior to welding or brazing**
- **Prevent misalignment**
- **Eliminate welding "icicles"**

Speedline Aligning Connectors save time—and costs—in assembly of the most complex system layouts . . . as do the complete line of long tangent Speedline fittings. A Distributor near you stocks Speedline Fittings—ask him for details, or write for a Speedline catalog today.

1007

Speedline **CORROSION-RESISTANT FITTINGS**
Stainless Steel • Aluminum • Special Alloys

Manufactured by **HORACE T. POTTS COMPANY** • 532 E. Erie Ave. • Phila. 34, Pa.

▲ For more details circle **NED-192 D** on enclosed inquiry slip ▲

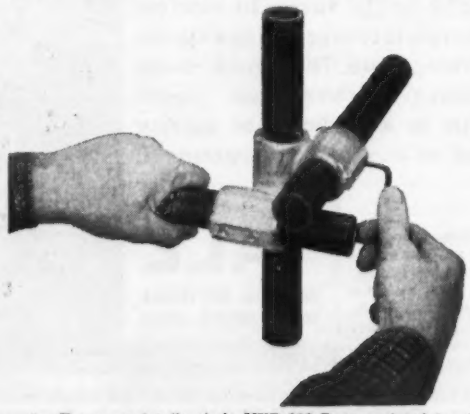
You can
BUILD
CHANGE
EXPAND
MOVE
your storage racks with only a
HEX KEY,
HACKSAW
and
RACKMASTER® FITTINGS

RACKMASTER FITTINGS cut rack-building time as much as 60% by eliminating threading and welding. They cut other rack-building costs, too—

- pipe is 100% salvageable
- pipe-cutting is reduced to a minimum
- regular warehouse crews can build racks
- slip-on feature simplifies design and construction

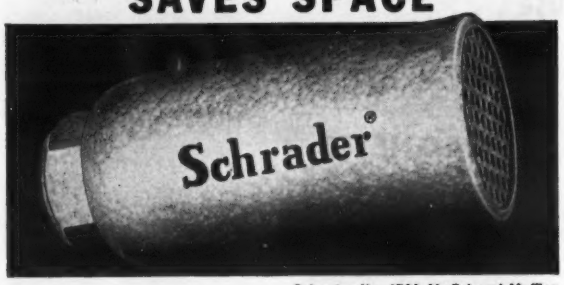
RACKMASTER is stocked by leading distributors. Write for details on Rackmaster and multi-purpose NU-RAIL Fittings Bulletin 32-E

THE HOLLAENDER MANUFACTURING CO., 3841 Spring Grove Ave., CINCINNATI 23, O.



▲ For more details circle **NED-193 D** on enclosed inquiry slip ▲

NEW! MINIATURIZED SCHRADER AIR EXHAUST MUFFLER SAVES SPACE



Schrader No. 476A Air Exhaust Muffler

Compact . . . sturdy . . . especially designed for use in cramped areas.

Reduces noise to a whisper. Eliminates need to pipe harsh, disturbing air exhaust to outside of building.

Improves plant working conditions . . . ups production . . . by reducing noise-induced fatigue.

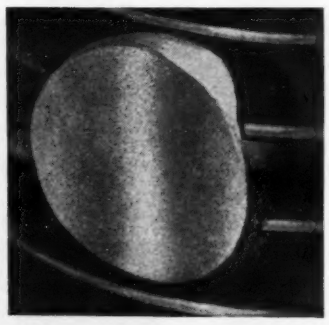
Size: Over-all length, 3¼". Diameter, 1 7/16". Has ⅜" N.P.T. (Specify #476A Schrader Air Exhaust Muffler —your Schrader Distributor has it now!)

Schrader a division of SCOVILL

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

QUALITY AIR CONTROL PRODUCTS

▲ For more details circle **NED-194 D** on enclosed inquiry slip ▲



The pellet with positive locking power . . . only with self-locking UNBRAKO!

- Nylok* principle means *maximum* thread area, *maximum* screw strength.
- Simplifies design and assembly, saves weight—no separate locking devices needed.
- Cuts maintenance by drastically reducing time spent checking and tightening joints.
- Cuts downtime—an UNBRAKO with Nylok won't back off even under severe vibration.

Self-locking UNBRAKO socket screws are easily removable, repeatedly reusable, and serviceable from −70° to 250°F. See your SPS distributor or send for Bulletin 2196 and samples.

*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

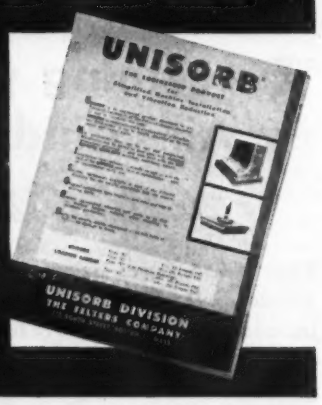
INDUSTRIAL FASTENER Division **SPS**

JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle **NED-195 D** on enclosed inquiry slip ▲

FREE

Bulletin Tells All About Machine Mounts!



Here's complete data on machine mounts — describes various kinds, how to use them, gives specifications.

Shows how to save up to 80% in machine installation, cut vibration, reduce noise and make machines run better and longer.

Make sure you know all about this modern method of machine mounting. Send for this Unisorb Bulletin today. No cost or obligation.

FE 0-6

UNISORB Division of The Felters Co. 224 South St., Boston 11, Mass.

▲ For more details circle **NED-196 D** on enclosed inquiry slip ▲

AIR-POWERED C-CLAMPS with 6, 7, 8, and 9-in. openings

Heavy-duty series and low-cost series make available air-operated C-clamps tailored to almost any industrial requirement. Clamps have a manual sleeve valve or an integral solenoid valve for automation applications. Model shown has 0 to 6-in. adjustable opening with depth of 3¼ in., and a 7:1 power factor. Units with maximum openings of 7, 8, and 9 in. are available. • **Airmatic Valve, Inc.**, 7313 Associate Ave., Cleveland 9, Ohio.

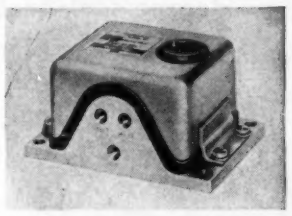
▲ For more details circle **NED-197 D** on enclosed inquiry slip ▲

PLASTIC HOT DRINK CUP disposable type is insulated

Comfortable to hold when used for hot beverages, the all-plastic ScottCup 7 PHV is impermeable to moisture, thus eliminating vapor rings on desk tops and other surfaces. It is made of two plies of impact polystyrene, the outer foamed ply providing insulation. Nonskid and nonflaking exterior, smooth hard lip, seamless construction, and smooth white stainless liner are other features of the 7-oz disposable cup. It is unaffected by boiling water temperatures, emitting neither ordor nor taste. • **Scott Paper Co.**, Vending Cup Div., 980 N. Delaware Ave., Philadelphia 23, Pa.

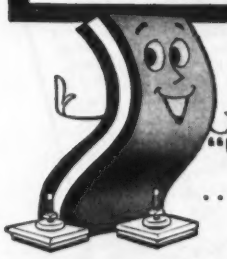
▲ For more details circle **NED-198 D** on enclosed inquiry slip ▲

MALFUNCTION MONITOR detects excessive machine vibration



Pneumatic version of the Vibraswitch malfunction monitor detects several types of vibration in rotating and reciprocating machinery. Increased amplitude of vibration caused by actual physical increase in motion, increase in velocity based upon how fast the device shakes, and acceleration increases caused by the degree of rapidity that the vibration changes direction are detected by this Model 67. It responds to high frequency, low level vibration, and warns of bearing failure, broken piston rings, or other damage. Excessive vibration operates the warning or shut-down gear to prevent further damage. Explosion and weatherproof cases are offered. • **Robertshaw-Fulton Controls Co.**, Aeronautical & Instrument Div., Santa Ana Freeway at Euclid Avenue, Anaheim, Calif.

▲ For more details circle **NED-199 D** on enclosed inquiry slip ▲



NEW! UNISORB "UL" Machine Mount

. . . for machines with built-in Leveling Screws

The new model "UL" Unisorb Level-Rite Mount has been developed specially for use under machines with their own leveling screws.

It combines Unisorb vibration control pads with a cast steel base plate having a recessed center to accept the leveling screw. The Unisorb Level-Rite "UL" eliminates all need for anchor bolts or lag screws, and machines can be moved whenever needed. The Unisorb Pad reduces transmitted vibration up to 85%, allows higher machine speeds, cuts noise and lowers building maintenance.

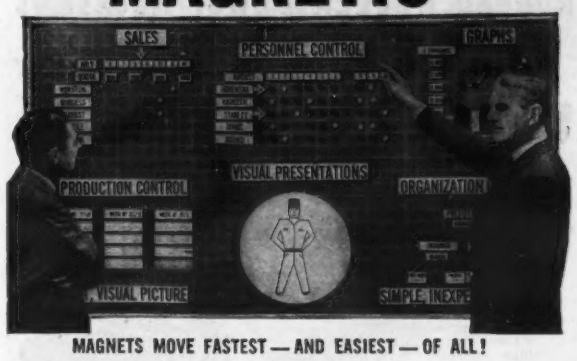
Unisorb Level-Rite "UL" is available in a range of sizes and loadings, and with high or super density Unisorb to meet all requirements. Send for Unisorb Bulletin or ask for Money-back trial offer.

FE 0-4

UNISORB 224 SOUTH STREET BOSTON, MASS.

▲ For more details circle **NED-200 D** on enclosed inquiry slip ▲

VISUAL **MAGNETIC** CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

PRICE LIST & BROCHURE NE4 FREE ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS

Methods Research Corp.
105 Willow Ave., Staten Island 5, New York

▲ For more details circle **NED-201 D** on enclosed inquiry slip ▲

LepeL

HIGH FREQUENCY INDUCTION

HEATING EQUIPMENT

for Hardening • Annealing • Soldering
Brazing • Zone Refining • Crystal Growing

ELECTRONIC TUBE GENERATORS:
1 kw; 2½ kw; 5 kw; 10 kw; 20 kw; 30 kw; 50 kw; 75 kw; 100 kw.

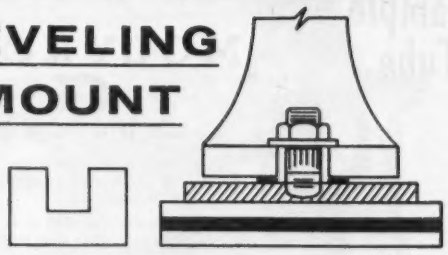
SPARK GAP CONVERTERS:
2 kw; 4 kw; 7½ kw; 15 kw; 30 kw.

WRITE FOR THE NEW LEPEL CATALOG 36 illustrated pages of valuable information.

LepeL HIGH FREQUENCY LABORATORIES, INC.
55th ST. & 37th AVE., WOODSIDE 77, N. Y.

▲ For more details circle **NED-202 D** on enclosed inquiry slip ▲

NEW UNISORB "Do-it-Yourself" LEVELING MOUNT



Here's a simple, low-cost way to make your own combination machine mount and leveling device.

(1) Countersink hole in plate for threaded stud, (2) Tack weld stud to plate, (3) Clean floor and plate, (4) Apply cement to both sides of Unisorb and press Unisorb to bottom of plate, (5) Insert stud through bolt hole, (6) Shim between base of machine and top of plate — to required level, (7) Lock in place with locknut.

This Unisorb Mount will reduce transmitted vibration up to 85%, eliminate bolts or lag screws in floor, hole drilling, grouting, and tricky spotting, reduce noise and worker fatigue, and allow machine to operate better and last longer.

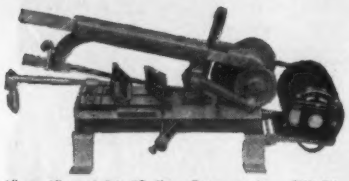
SEND FOR UNISORB BULLETIN
Tells more about DO-IT-YOURSELF plus many other ideas on Unisorb machine mountings. Send today.

FE0-05

UNISORB Division of The Felters Co. 224 South St., Boston 11, Mass.

▲ For more details circle **NED-203 D** on enclosed inquiry slip ▲

Cut Cutting Costs with Rugged KELLER Power Hacksaws



JEFFERSON "601"

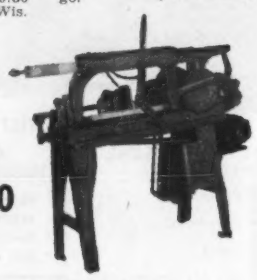
4" x 4"—Cast base, Oilite bearings throughout, 45° swivel vise, uses standard 12" saw blades.

Complete with motor, switch, ready-to-go. **$79.00**

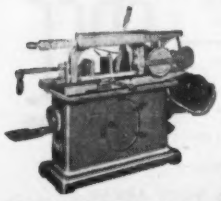
4" x 4" weight 83 lbs. Less motor. $59.50 all prices F.O.B. Factory, Eau Claire, Wis.

No. 3C WET CUT

6¾" x 6¾" with built on coolant tank and pump. Features include automatic lift on return stroke, adjustable bronze bearings in saw frame guide bar, 45° swivel vise, automatic stop switch.



Complete with 1 ph., 110 V. AC motor and switch wired, ready-to-go. **$365.00**



No. 4 HY-DUTY

8½" x 8½"—A rugged, fast saw ideal for production, tool room or maintenance.

Complete with 1 or 3 ph. AC motor and switch wired, ready-to-go. **$625.00**

Ask your KELLER Distributor or write for illustrated Bulletin #257 describing 5 sizes—10 models.

Sales Service Mfg. Co.
2365 University Ave., St. Paul 14A, Minn.

▲ For more details circle NED-204 D on enclosed inquiry slip ▲

NEW... Today's "Tightest" Toughest Ball Valve!

Rockwood Type 316 Double Seated Stainless Steel Ball Valve

You get *positive* shut-off as well as maximum corrosion resistance with this new 316 stainless steel Rockwood Ball Valve. Exclusive spring rings back up its twin Teflon* seats . . . automatically compensate for pressure variations, wear, cold flow, and temperature effects. With flow in either direction, at any pressure, seats always hug the ball. Only ball valve with integrally cast flanges or screw ends, too. They *stay* leakproof. For use from −65°F to +350°F. Easily modified for cryogenics. Holds tight under vacuum. Handles air, alcohols, fuel and inert gases, water glass and many other fluids. Sizes ⅜" thru 2". 4 Models. Write for details. *DuPont Reg. T. M.

ROCKWOOD SPRINKLER COMPANY
A Division of The Gamewell Company
890 Harlow Street, Worcester 5, Mass.

▲ For more details circle NED-205 D on enclosed inquiry slip ▲

Free Sample Tube — Industry's NEWEST Production TOOL

MOLYKOTE® G LUBRICANT

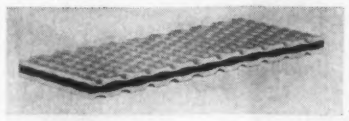
- ALMOST 100% SAFETY AGAINST GALLING AND SEIZING WITH ALL BEARING METAL COMBINATIONS
- ELIMINATES STICK-SLIP, METAL PICK-UP AND DISTORTION IN PRESS FITTING
- REDUCES WEAR-IN TIME AND DAMAGE IN NEW OR REBUILT MACHINERY
- THE HIGHER THE LOADS, THE GREATER THE MARGIN OF SUPERIORITY OF MOLYKOTE G

Write for your free sample of MOLYKOTE G LUBRICANT today. We will also send you a copy of our new Bulletin 126 which gives complete details. THE ALPHA-MOLYKOTE CORPORATION, 65 Harvard Avenue, Stamford, Conn. Phone FIreside 8-3724. Plants in Stamford, Conn., Munich, Germany and Strasbourg, France.

THE ALPHA-MOLYKOTE CORP.
65 Harvard Ave., Stamford, Conn.
Please send me a free sample of your MOLYKOTE G Lubricant.
NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

▲ For more details circle NED-206 D on enclosed inquiry slip ▲

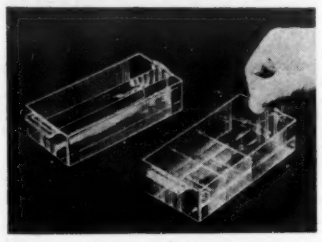
ANTIVIBRATION MOUNTING PAD has vacuum suction cup pattern



Placed under the base or feet of machines, Vibra-Check mounting pads eliminate 90 per cent of machine vibration and stop creeping or crawling as well. Pads have a vacuum suction cup pattern, conform to rough or uneven floors, and will not deform or set permanently, even under shock loads to 7500 psi. They are composed of two layers of vinyl chloride elastomeric resin bonded to both sides of a reinforcing core of monofilament glass fiber and fused under heat and pressure. Material is available in 22 x 23-in. sheets, or cut to size to yield unit loading of 50 to 100 psi. • **Lowell Industries, Inc.**, Allston Station, Boston 34, Mass.

▲ For more details circle NED-207 D on enclosed inquiry slip ▲

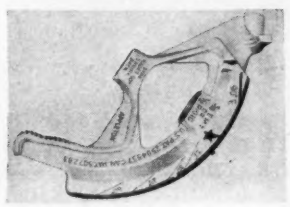
PARTS CABINET DRAWER plastic divider is adjustable



Press-on labels indicate contents of JD-1 De Luxe drawers for Akro-Mils parts storage cabinets. The JD-S clear plastic drawer divider has a clamping effect when shoved into place, preventing creepage. Variety of compartment sizes is thus available. Drawer has a measure scale for facilitating counting and inventory control. It is 3/64 in. deeper and ⅛ in. wider than former models, yet has the same outside dimensions. • **Akro-Mils, Inc.**, 820 E. Market St., Akron 9, Ohio.

▲ For more details circle NED-208 D on enclosed inquiry slip ▲

TUBE & CONDUIT BENDERS degree scale makes accurate bends



Thin wall electrical metallic tubing and rigid steel and aluminum conduit are accurately hand bent with two Appleton-Benfield benders. Three standard one-piece models have a solid nonskid hook, and an extended foot treadle that effectively bend ½, ¾, and 1-in. thin wall and ½ and ¾-in. rigid steel and aluminum conduit. Prices are $3.10, $5.30, and $9.50. Three Powr-Jack models with booster step that doubles the leverage ratio bend ¾, 1, and 1¼-in. thin wall and ½, ¾, and 1-in. rigid aluminum or steel conduit. Prices are $8.75, $11.75, and $19.75. Both malleable iron models have a degree scale and bold symbols for making accurate bends. • **Appleton Electric Co.**, 1701 W. Wellington Ave., Chicago 13, Ill.

▲ For more details circle NED-209 D on enclosed inquiry slip ▲

Here is the pair for clean, dry air . .

JOHNSON AFTERCOOLER
Used where moisture is vaporized by the heat of compression. Circulates cooling water around the line, condenses the oil and water vapor so Separator can remove them. Simple in design, highly efficient in performance.

SIZES FOR ALL NEEDS

JOHNSON SEPARATOR
Removes more than 99% of all water, dirt and oil from compressed air or steam. Combines the *two* best principles of separation—first allows air to expand slightly, then changes flow direction with the "Thousand Baffles". Model illustrated is the newest idea in separator design, with self-draining trap mechanism built right in.

WRITE FOR BULLETIN

The Johnson Corporation
812 Wood Street Three Rivers, Michigan

▲ For more details circle NED-210 D on enclosed inquiry slip ▲

to keep hydraulic valves free and functioning properly use . . .

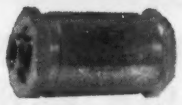
FERROFILTER®

MAGNETIC SEPARATORS

High Pressure FERROFILTER Magnetic Separators protect hydraulic systems in a wide variety of industrial equipment as well as aircraft, missiles and ground support equipment. They remove microscopic ferrous particles which may pass through edge-type strainers and even escape conventional cartridge type filters.

FERROFILTERS help prevent sticking and nonfunctioning of finely fitted valves, pistons and other precision-made components.

S. G. FRANTZ CO., Inc.
564 Kline Ave. at Brunswick Pike
P. O. Box 1138 Trenton 6, N. J.



Model PX-2 High Pressure Aircraft FERROFILTER

3000 psi working pressure . . . 12 gpm flow capacity . . . 3 lbs dry weight . . . ¾—16NF—3 thread for ½" tube connection. Spec. AND-10050 . . . Size 5⅜" long, 2½" dia. Model PX-1 for 6 gpm, ⅜" tube.

Model P2H-50 High Pressure Industrial FERROFILTER

5000 psi working pressure . . . 12 gpm flow capacity . . . 15 lbs dry weight . . . for ¾" taper pipe, NPTF; also ¾" tube connection. Spec. AND-10050. Others rated at 2000 psi; Capacities up to 40 gpm.

Write for Bulletin HP-56 and other literature

▲ For more details circle NED-211 D on enclosed inquiry slip ▲

Thor

Everything you want in Air Grinders . . . *and more!*

Thor No. 5 series heavy duty air grinders. Safest grinders ever built. 100% increase in power at no increase in weight. Remove far more metal in far less time. Positive safety control, in addition to standard governor, absolutely prevents "run-away" tools. If governor fails, air supply is cut off. Weight 10 lbs. Grip, lever or butterfly throttle. 4,500 and 6,000 r.p.m. grinding speeds.

Thor has a complete range of air grinder sizes and models. There's a Thor grinder to fit any metal removing or finishing problem. Your Thor factory representative or distributor will demonstrate. Thor Power Tool Company, Aurora, Illinois. Branches in all principal cities.

▲ For more details circle NED-212 D on enclosed inquiry slip ▲

LYON® BOOK CASES

Use these bookcases individually or in continuous rows to provide number and size of openings needed. Sliding shelves adjustable on 1½" centers. Snap-on book stops permit instant partitioning. Baked-on gray enamel finish. Model at left is 37⅜" wide, 12⅝" deep, 86" high.

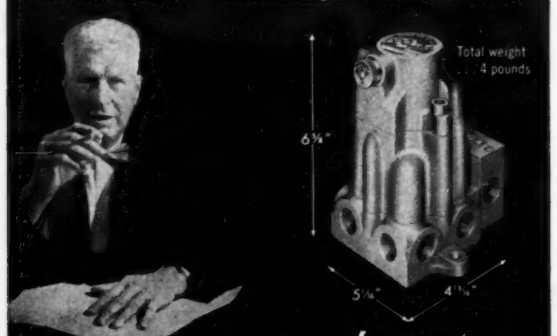
Model above, 37⅜" wide, 12⅝" deep, 29" high, comes with two end finishing panels. Front edge of top rounded for attractive appearance.

Write for free 92-page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

▲ For more details circle **NED-213 D** on enclosed inquiry slip ▲

THE HUNT PDQ
has Faster Response Time and Greater Capacity than Air Valves—*4 Times Its Weight and Twice Its Size!*



Here is a full 1/2" air valve at 4 pounds. Will flow 335 c.f.m. with 100 p.s.i.g. initial pressure to atmosphere. Measures 6-1/2" high by 5-1/16" wide by 4-13/16" deep.

The short-stroke pilot actuates a compact, full-orifice poppet-spindle amazingly fast . . . renders traditional air valves obsolete. Write us.

N. C. HUNT, PRESIDENT
HUNT VALVE COMPANY · SALEM, OHIO, U.S.A.

- ✓ Accessibility
- ✓ Simplicity
- ✓ Speed and Capacity
- ☐ Price and Quality

The Hunt PDQ Valve tops them all in every class.

Next month . . . the PRICE and QUALITY story.

HUNT *Quick-As-Wink* AIR & HYDRAULIC CONTROL VALVES

▲ For more details circle **NED-214 D** on enclosed inquiry slip ▲

LYON® FILING CABINETS

Quality Design All the Way

- **Easy rolling drawers** glide on six ball bearing and two floating rollers for smooth operation.
- **Double stops**—prevent drawers from being pulled out and spilled accidentally.
- **Drawers stay closed**—no rebound when drawers are slammed or when cabinet is used on uneven floors.
- **Drawers easily removed**—just open wide and lift. No catches to unlatch. Back of drawer has hand grip.
- **Rounded corners** on drawers and cross rails match the beauty of attractive, modern handles and label-holders. Cabinet finish, gray baked-on enamel.

Write for free 92-page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

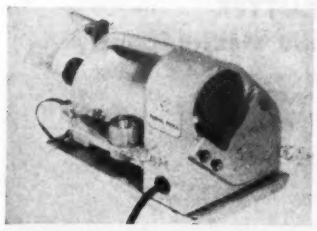
▲ For more details circle **NED-215 D** on enclosed inquiry slip ▲

HIGH SPEED RELAY
mercury wetted type

Speeds up to 100 operations per second are possible with this mercury-wetted contact relay. An addition to the mercury plunger relay line, it is designed for high speed switching and has a reported life of billions of operations. Contact rating is 250 va, 500 v maximum, 5 amp maximum (with suitable protection). • **Adams & Westlake Co.**, 1019 N. Michigan St., Elkhart, Ind.

▲ For more details circle **NED-216 D** on enclosed inquiry slip ▲

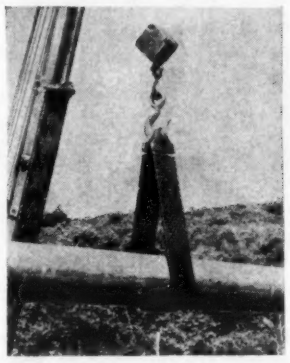
CLEANING & DEBURRING MACHINE
for copper tubing and fittings



All sizes of copper tubing and fittings up to 4-in. can be cleaned and deburred by this portable Toled-O-Matic No. 1 Buff-Ezy cleaning and deburring machine. Three sizes of brushes and a rotary internal deburring tool are provided for internal operations, whereas a 4-in. main brush with adjustable "reverse L" guide handles external work. The 52-lb machine is powered by a ⅓-hp, 115-v single-phase ac motor and can be bench mounted. Also useful for cleaning threaded fittings and internal valve threads, unit sells for $128.50. • **Toledo Pipe Threading Machine Co.**, Box 1678, Toledo 3, Ohio.

▲ For more details circle **NED-217 D** on enclosed inquiry slip ▲

RUBBER-GROMMETED SLING
handles loads without damage



Many industrial handling applications are feasible with Swing Slings which will support long, heavy pipe and other sections without damage. Sling is made of parallel high-strength aircraft cables covered with rubber grommets secured at the ends by special attachments. Grommets afford a wide-bearing rubber exterior to protect coatings or other penetrable surfaces on the lifted object. Flexible, lightweight slings are made in five industrial and two pipeline models, each designed for both basket and choker hitches. • **Colorado Fuel & Iron Corp.**, Palmer, Mass.

▲ For more details circle **NED-218 D** on enclosed inquiry slip ▲

KROIL CREEPS IN

loosens frozen parts

19,000 industrial users depend upon this amazing new chemical tool when some frozen parts tie up valuable machinery or threaten production. They say . . .

"Kroil will loosen almost anything from an embalmer's needle to a bulldozer."

"We have excellent results loosening stuck slides on musical instruments."

"On a 25-year old Bessemer gas engine, two bolts twisted off before . . . after using Kroil, they all came out easily."

"Before trying Kroil on heat treat trolleys we broke off every nut . . . since then, we have not lost one."

You too can get these results. Try KROIL on money-back basis.

Gallon $4.35; with Kroiler squirt gun, $5.25, f. o. b. factory.

Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 Thomson Lane Nashville 11, Tenn.

▲ For more details circle **NED-219 D** on enclosed inquiry slip ▲

LYON® DRAWER TOOL STANDS

22¼" wide, 20½" deep, 34" high. Baked-on gray enamel finish.

Four drawers with recessed handles and sliding trays. Heavy duty work top may be reversed to provide tray with ½" flange on all sides. Swivel type casters with 5" composition rubber wheels.

Write for free 92-page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

▲ For more details circle **NED-220 D** on enclosed inquiry slip ▲

NEW FROM WHITING

speed handling with

PRESSUREGRIP vacuum lifter

Versatile Whiting Pressuregrip vacuum systems pick up even rough textures, like diamond tread plate, plywood, or concrete. Special narrow grippers are available to lift rails, beams, or even pipe.

UNDER-THE-HOOK PRESSUREGRIP UNITS (shown above) speed overhead crane operation—eliminate time-consuming chain rigging—cut materials handling costs.

CUSTOM PRESSUREGRIP VACUUM FEEDING EQUIPMENT can be designed to your requirements. Whiting engineers are at your service to automate many repetitive operations.

WRITE TODAY FOR NEW BULLETIN V-100
"Whiting Pressuregrip"

Whiting Corporation, 15660 Lathrop Avenue, Harvey, Illinois

WHITING

▲ For more details circle **NED-221 D** on enclosed inquiry slip ▲

LYON® WORK BENCHES

HEAVY-DUTY STEEL TOP

Here are lifetime steel benches that thrive on hard usage. Tops won't crack, splinter, gouge or become oil soaked. Accessory equipment includes shelves, back and end stops, drawers, shelf risers and electrical outlet strips. Gray baked-on enamel finish. Also available—hardwood tops and pressed wood over steel tops.

Write for free 92-page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

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EDMONT CASE NO. 607: For handling oily steel stock and metal parts, a manufacturer had been using canvas gloves that lasted one shift. Edmont recommended a very flexible plastic coated glove with excellent wet grip (No. 404 Snorkel) which averaged 16 shifts and cut glove costs 84%.

Glove costs dropped 84%

No. 404 Snorkel Fully coated knitwrist

In the case above, glove costs dropped from 27 cents per man-shift to only 4½ cents because the Edmont-recommended "Snorkel" fit the job. Its industrial weight vinyl coating has excellent resistance to abrasion, is liquid-proof, extremely flexible and has an outstanding grip for both wet and dry handling.

Free Test Offer to Listed Firms: Tell us your operation, materials handled, temperature condition. From more than 50 different types of gloves we will recommend the one that best fits your job and send you samples for comparison testing on-the-job.

Edmont JOB-FITTED GLOVES

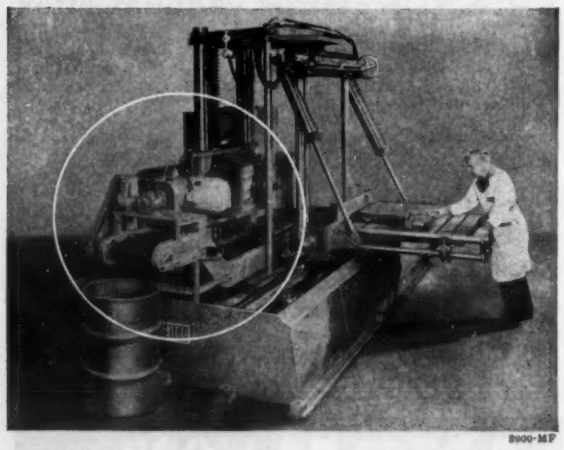
Edmont Manufacturing Company
1240 Walnut Street, Coshocton, Ohio
In Canada write MSA, Toronto

▲ For more details circle NED-223 D on enclosed inquiry slip ▲

MAY-FRAN CHIP-TOTE

FEATURED ON **HILL**

TAPE-CONTROLLED HIGH-SPEED DRILLING AND BORING MACHINES



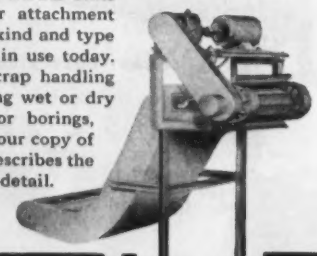
8900-MF

SCRAP REMOVAL IS AUTOMATIC AND CONTINUOUS!

Here is another excellent application for the May-Fran CHIP-TOTE CONVEYOR for the handling of chips, turnings and borings from metal working machines.

In the photo above, the CHIP-TOTE is shown as an integral part of a HILL automatic and tape-controlled high-speed drilling and jig boring machine (a product of Walter P. Hill, Inc.) because the CHIP-TOTE automatically and continuously removes all scrap from the machine, operation through an entire production run can be obtained without shut-down because of scrap build-up.

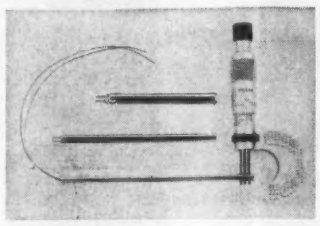
May-Fran CHIP-TOTE units are available for attachment to almost every kind and type of machine tool in use today. If you have a scrap handling problem involving wet or dry chips, turnings or borings, write today for your copy of MF-640 which describes the CHIP-TOTE in detail.



MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Rd. • Cleveland 12, Ohio

▲ For more details circle NED-224 D on enclosed inquiry slip ▲

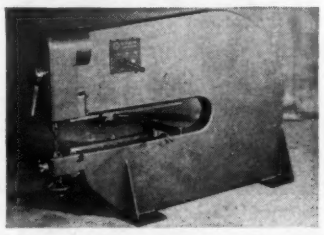
CARTRIDGE HEATER
miniature unit heats to 1250° F



Process machinery and instrumentation are applications for these ⅛-in. diameter miniature cartridge heaters. They operate at maximum surface temperature of up to 1250° F and are made in any desired length with a stainless steel sheath. When used as high temperature resistors, they supply up to 50 w per square inch maximum density. Most voltages, including 115 and 230 v, are available at no extra charge. Minimum length is 1 in. Also offered are 3/16 and ¼-in. diameters. • **Hotwatt, Inc.**, 75 Maple St., Danvers, Mass.

▲ For more details circle NED-225 D on enclosed inquiry slip ▲

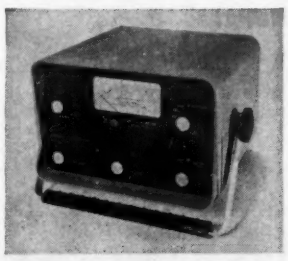
SHEET & PLATE CUTTER
has 5/32-in. mild steel capacity



Straight, circle, figure, and slot cutting, beading, folding, louvering, nibbling, planishing, and flanging can be performed on the Swedish GV Junior Metal Worker with appropriate tooling. The sheet and plate working machine has an edge-cutting capacity in mild steel of 5/32 in. Throat depth is 28½ in. • **Homestrand Machine Tool Corp.**, 392 W. Putnam Ave., Greenwich, Conn.

▲ For more details circle NED-226 D on enclosed inquiry slip ▲

VIBRATION METER
portable unit is transistorized



Direct readings of velocity, displacement amplitude, and acceleration components of vibration are provided from input signals by the Model T-1A vibration meter. By a simple computation, vibration frequency is obtained from the portable, battery powered, transistorized unit. Up to six simultaneous piezoelectric or seismic type transducer outputs, three for velocity type pickups and three for crystal accelerometers can be used. Readings up to 1000 g acceleration, 0.01 to 100 ips velocity, and 0.001 to 10 in. displacements are provided at accuracy exceeding 5 per cent. Plug-in filters will remove frequencies below 10, 15, 30, 70, 110, 150, and 200 cps. Output jacks permit use with an oscilloscope or recorder. Price is $475. • **Southwestern Industrial Electronics Co.**, 10201 Westheimer Rd., Houston 27, Tex.

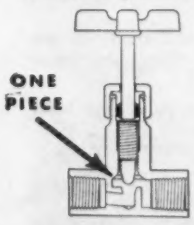
▲ For more details circle NED-227 D on enclosed inquiry slip ▲

MARSH *Needle Valves*

MAXIMUM WORKING PRESSURE 10,000 PSI

. . . for finer regulation of water, oil or gas

First needle valve to combine all the characteristics called for in modern industry. Embodies sturdiest basic construction—machined from solid bar stock—suitable for pressures to 10,000 psi and equally efficient in lower range. Note stem guide fused to body by new "Conoweld" process, eliminating faults of conventional two-piece valves. Stem 416 stainless steel. Stem threads fine pitch for strength and micrometer regulation. Body electrozinc plated. Sizes ⅛" to 1", globe and angle patterns.



Ask for new Needle Valve Catalog

MARSH INSTRUMENT COMPANY
Division of Colorado Oil and Gas Corporation. Dpt. 26, Skokie, Ill.
Marsh Instrument & Valve Co. (Canada) Ltd., 8407 103rd Street, Edmonton, Alberta, Canada

▲ For more details circle NED-228 D on enclosed inquiry slip ▲

NEW REVOLUTIONARY DESIGN FOR LOW COST MACHINE MOUNTINGS

THE NEW EASY BETTER WAY TO INSTALL MACHINERY

Scientifically constructed suction cells anchor machine to floor. No bolts, lag screws or cement needed.

FABCEL Pads
Patent Applied For

Write for new catalog

- Control Vibration
- Absorb Impact
- Reduce Noise

FABREEKA PRODUCTS COMPANY, INC.
1190 Adams Street, Boston 24, Mass.
Representatives in principal cities
In Canada: International Equip. Co., Ltd.
Royal Bank Bldg., Montreal

- made by the makers of Fabreeka -

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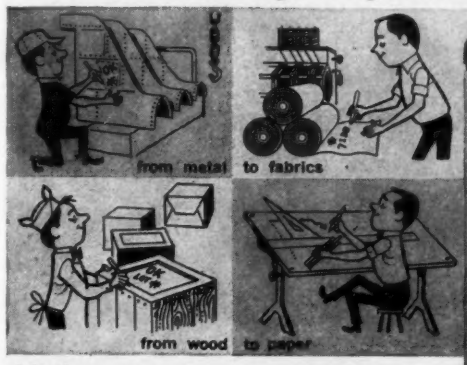
Mark in color on any surface



felt tip

CADO-MARKER

The finest inexpensive industrial marker your money can buy; and it's refillable!

Factory-filled with oil-based ink in choice of eight colors. Instant-dry – Waterproof – Permanent – Transparent

At stationers and marking equipment suppliers everywhere. For complete information, write to Dept. NED-4

CUSHMAN & DENISON
Manufacturing Company • Carlstadt, New Jersey

Refills available

▲ For more details circle NED-230 D on enclosed inquiry slip ▲

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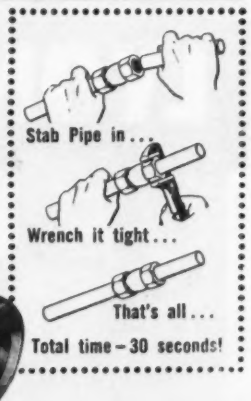
30 seconds to solve tough piping problems



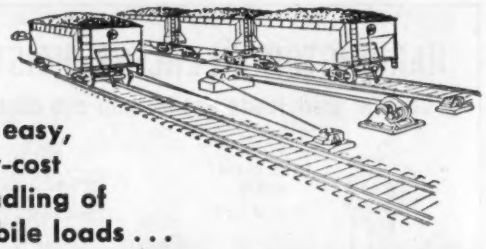
Dresser Coupling Style 65

Name your piping problem: misalignment, vibration stresses, cramped working quarters, or costs of future maintenance and takedown. Dresser Style 65 Couplings solve them *all*. Installed with a simple hand wrench, it takes you 30 seconds to make a permanent, tight joint! Water, oil or gas lines in diameters up to 2-inches . . . plain end pipe (no threading problems). The non-rigid Dresser® Coupling compensates for pipe misalignment, absorbs stresses and vibrations. Booklet No. 531 further shows many typical cases where Dresser Couplings solved tough piping problems.

Dresser Manufacturing Division, Bradford, Pennsylvania

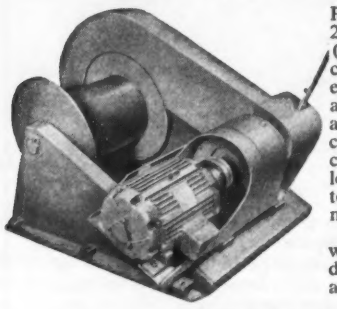
DRESSER MANUFACTURING DIVISION

▲ For more details circle NED-231 D on enclosed inquiry slip ▲



For easy, low-cost handling of mobile loads . . .

LINK-BELT DRUM-TYPE CAR PULLERS



Powerful enough to move 20 loaded freight cars (1000 tons), Link-Belt car pullers bring ease and economy to heavy haulage jobs. They're ideal for a wide variety of applications . . . moving freight cars and barges, dragging loaded skids, pulling materials in and out of furnaces, kilns, ovens.

Available *from stock* with single or double drums . . . in many types and capacities.

SEND FOR *NEW* BOOK 2892

LINK-BELT

CAR PULLERS AND CAR SPOTTERS

LINK-BELT COMPANY: Prudential Plaza, Chicago 1, Ill. 15,236

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ATLAS 10" FLOOR SAW

BIG CAPACITY, PERFORMANCE, VALUE!

. . . ideal for production, shipping and maintenance departments.

The new Atlas 10" tilt/arbor floor saw is heavier throughout . . . more powerful . . . greater in production capacity . . . and unmatched for ease of operation and safety . . . the new Atlas gives you performance never before achieved in a 10" saw. Available in 3 big table sizes — up to 54¾" x 27½". Powered by continuous-duty motors, 1 to 3 HP. Self-contained design.

Write for free literature today.

ATLAS PRESS COMPANY

4-15 N. PITCHER STREET • KALAMAZOO, MICHIGAN

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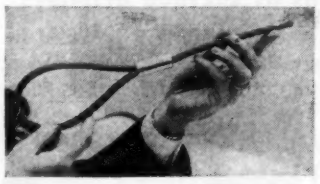
EAR PROTECTORS
permit conversation, exclude noise

Improved Model 372-9A Straightaway ear protectors which reduce or attenuate harmful extraneous noise levels yet permit normal voice conversation are now more comfortable to wear. Soft vinyl foam ear seals can be taken off and put on in seconds and are held in place by braided nylon and neoprene band. A wider, more flexible head band minimizes pressure for wearing comfort. Protectors attenuate noise levels up to 130 db for long periods and up to 140 db for short periods. Price is $12. • **David Clark Co.**, 360 Park Ave., Worcester, Mass.

▲ For more details circle NED-235 D on enclosed inquiry slip ▲

CABLE-CLAMPING FERRULES
join wire rope loops for lifting



Eight standard sizes and shapes of extruded aluminum ferrules are used to clamp together loops of heavy wire rope for lifting machinery, crates, and raw materials weighing many tons. Under pressure the aluminum flows into all the minute spaces between the wire rope strands, locking the loop tightly. Ferrules are applied under high pressure without heat. • **Reynolds Metals Co.**, Reynolds Metals Bldg., Richmond 18, Va.

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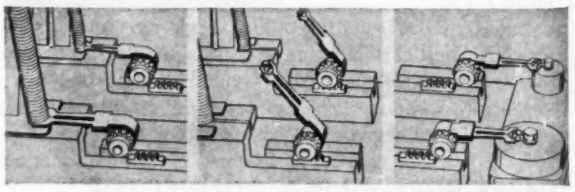
RETAINING RING ASSEMBLER
installs rings picked up from stack

High speed assembly of radially-installed Truarc Series 5103 crescent rings, Series 5133 E-rings, and Series 5144 Reinforced E-rings is possible with the Ring-O-Mat



assembly machine. Unit shown installs two rings simultaneously in two roller assemblies. Machine is activated by either foot pedal or hand controls. Applicating tools grasp bottom rings from dispenser brackets, extract them, make a 180-degree arc, and move forward to assemble the rings on the roller studs. Machine is adapted to individual production operations with a special nest fixture for holding work piece. • **Waldes Kohinoor, Inc.**, Truarc Retaining Rings Div., 47-16 Austel Place, Long Island City 1, N. Y.

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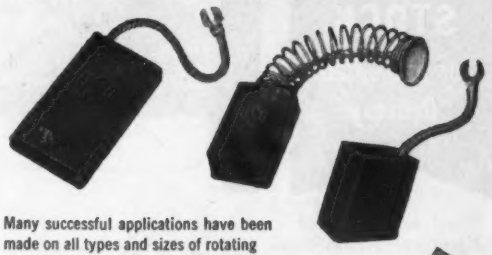
ANY TYPE OR SIZE

USG® BRUSH FOR FRACTIONAL HP OR INDUSTRIAL MOTORS



Many successful applications have been made on all types and sizes of rotating electrical equipment with USG motor and generator brushes and contacts manufactured by The United States Grapnite Company. USG brushes are available in OEM production quantities or for replacement purposes in the following grades: carbon, carbon-graphite, electro-graphitic, graphite and metal-graphite. Special grades can be developed to meet your specific needs.

Write today for Engineering Handbook B-56 and the Brush Grade Supplement.

THE UNITED STATES GRAPHITE COMPANY

DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

B-282-1

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Lug Industrial Pneumatic Tire from Goodyear—a rugged performer from any angle!

NEW VIEW ON TIRE VALUE

Photographed through glass, this rugged Lug Industrial Tire by Goodyear tells quite a story.

Instantly, you see why this tire gives superior traction on slick, slippery surfaces. Goodyear's famous Lug tread design provides that extra *gripping* power—makes this tire ideal for use wherever sure-footed traction is required.

And since this is a *pneumatic* tire, it has the sidewall flexibility, smoothness and flotation that assure safe haulage of cargoes which *must* be handled with care.

There's terrific strength and stamina in this tire, too—provided by Goodyear's 3-T Cord that's triple-tempered in an exclusive process, involving Tension, Temperature and Time, for longer tire life, lower cost in the long run.

GET ALL THE FACTS on the Lug Industrial and the complete line of Goodyear Pneumatic and Solid Industrial Tires from your Goodyear Dealer. Or write Goodyear, Industrial Tire Sales, Akron 16, Ohio.

INDUSTRIAL TIRES BY GOODYEAR

More tons are hauled on Goodyear Truck Tires than on any other kind

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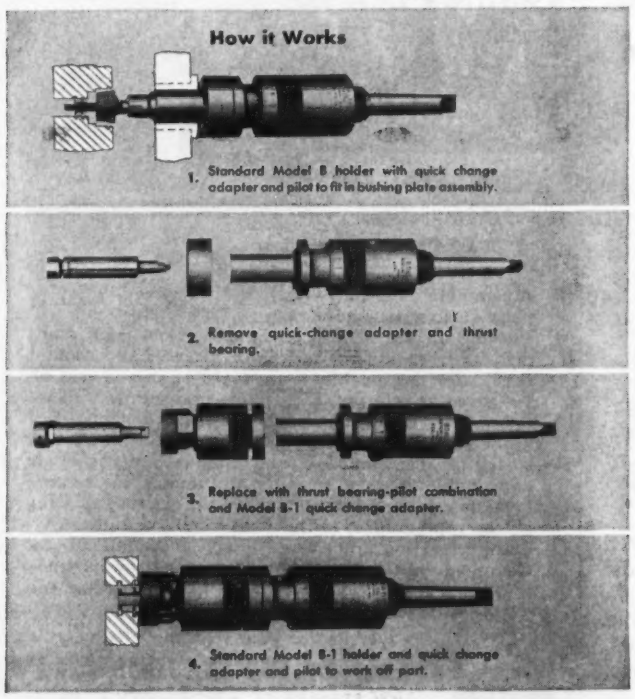
BOKUMATIC® RECESS TOOL HOLDERS

quick change feature permits you to work off fixture—off part

How it Works



LOOK at these plus-value advantages

- Only recess tool holder available with quick-change adapter.
- Holder convertible to off-center style for deeper recessing by changing to off-center type adapters.
- Holder uses straight shank cutting tools, reducing cost of perishable tools.
- Specially designed taper collet holds cutting tool in place. Holder can be used either vertically or horizontally.
- Holder convertible from jig fixture piloting to work piece piloting.
- Holder actuated by two cam pins 180° apart for smooth chatter-free recessing.
- Cam pins accessible for easy replacement.
- Replaceable tool holder shanks are located by two pilots for positive concentricity.
- Circular tools can be used since holder actuates cutting tool in special radial path.
- Cutting tool can be preset in quick-change adapter as to depth into part before tool holder is assembled.

Write today for catalog BO-1-60 Dept. T

BOKUM TOOL COMPANY, INC.

14776 WILDEMERE AVENUE

DETROIT 38, MICHIGAN

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EJECTORS FROM STOCK
For Immediate Delivery

*Rotameters and Flow Indicators, too.

Need a jet ejector in a hurry? Standard SK Jet Ejectors—steam jet syphons, water jet eductors, jet exhausters, blowers, compressors, and fume scrubbers—are stocked in popular sizes at SK's main plant near Philadelphia, in Houston, Texas and in San Francisco, Calif.*

For details on types, sizes, capacities, contact SK. Identify your requirement. For information on jet ejector line, ask for Bulletin J-1. Use phone or TWX for fast service.

Schutte and Koerting COMPANY
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.
Phone: MErcury 9-0900 TWX: Cornwells, Pa., 69-"U"
JET APPARATUS • ROTAMETERS • GEAR PUMPS • VALVES • HEAT EXCHANGERS
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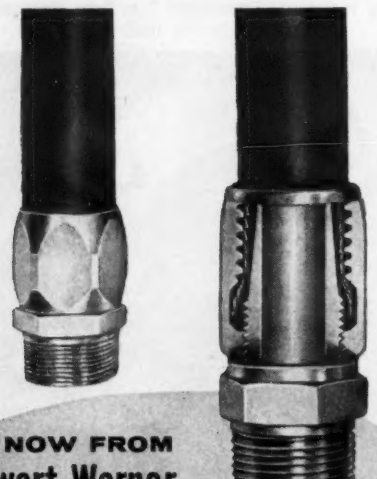

NOW FROM
Stewart-Warner
NEW SURGEPRUF

HYDRAULIC COUPLINGS AND HOSE

A FULL REUSABLE COUPLING LINE . . . ASSEMBLED TO SURGEPRUF NON-SKIVE AND SAE 100R1, 100R2 AND 100R5 HYDRAULIC HOSE...WITHOUT SPECIAL TOOLS!

Stewart-Warner's new, expanded Surgepruf line offers a full range of reusable couplings, hydraulic hose and adapters for all types of applications, ranging from fuel lines to high-pressure lines . . . available in complete assemblies for immediate use. Depend on this one reliable source for your hydraulic couplings and hose.

Only Surgepruf Reusable Couplings and Hose Have These Outstanding Features:

Superior Fluid Seal, with no wire braid exposure, eliminates seepage between coupling and wire braid.

Non-Skive Assembly provides fastest field assembly with just ordinary tools.

Superior Finish—precision-machined steel couplings have zinc dichromate finish . . . meet rigid salt-spray testing requirements.

Full Interchangeability—regardless of hose lines, Surgepruf couplings are available in any style and thread.

Write For New, Complete Surgepruf Catalogs!

Symbol of SW Excellence
ALEMITE DIVISION
STEWART-WARNER CORPORATION
1850 Diversey Parkway, Chicago 14, Illinois
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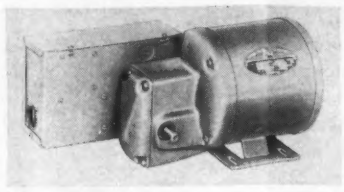
REVERSING GEAR MOTORS in 1/6 to 1-hp ratings

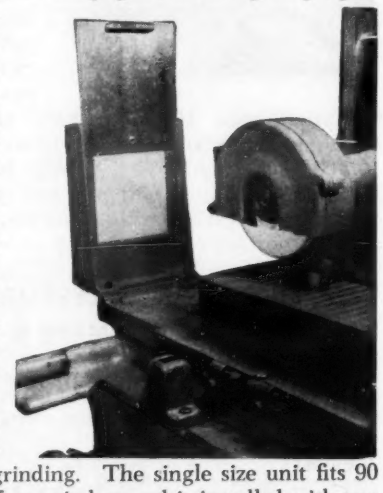


This instant-reversing Gear-O-Matic electric motor is offered in 1/6 through 1-hp ratings for powering garage doors, ventilators, indexing tables, machine tools, valves, factory gates, conveyors, monorail units, and x-ray equipment. Control is accomplished by signal from manual or automatic limit switches, and connections are provided for actuation by electronic signal equipment. Motor applies full power in either direction in response to switch. Ratios of 20:1 through 30:1 are available with worm gear reduction in the motor end bell. • **Franklin Electric Co.,** 346 E. Spring St., Bluffton, Ind.

▲ For more details circle NED-242 D on enclosed inquiry slip ▲

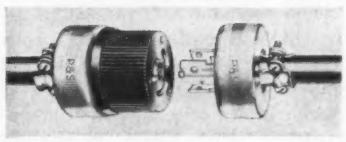
GRINDER GUARD & LIGHT fits 90 per cent of surface grinders

Safe, efficient back-of-the-wheel lighting is provided by the Guardlite, a safety attachment for surface grinders that serves as both a safety guard and sighting light. Body is aluminum alloy casting faced with an opalized, glare-free glass panel. Two 40-w bulbs illuminate the area for accurate sighting between work piece and grinding wheel. During grinding, a heavy gage stainless steel shield slides down over the glass. Assembly is waterproof for use with wet or dry grinding. The single size unit fits 90 per cent of all surface grinders and is installed with two bolts. • **Cutlas Tool & Mfg. Co.,** 4344 Lawndale Ave., Lyons, Ill.



▲ For more details circle NED-243 D on enclosed inquiry slip ▲

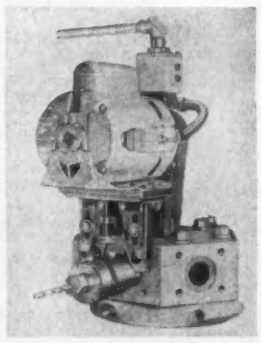
THREE-WIRE CAP & CONNECTOR cord grip type for heavy uses



Both the No. 7311 Turnlok three-wire cord grip cap and No. 7313 cord grip connector body are rated 20 amp, 250 v ac-dc and 10 amp, 600 v ac. The heavy armor, plastic connector body has large binding head screws, ample wireways, and resists corrosion. Cap also is heavily armored and has an accurately positioned blade assembly. Devices insure positive contact regardless of vibration, yet are disconnected by a slight turn of the cap. • **Pass & Seymour, Inc.,** Solvay Station, Syracuse 9, N. Y.

▲ For more details circle NED-244 D on enclosed inquiry slip ▲

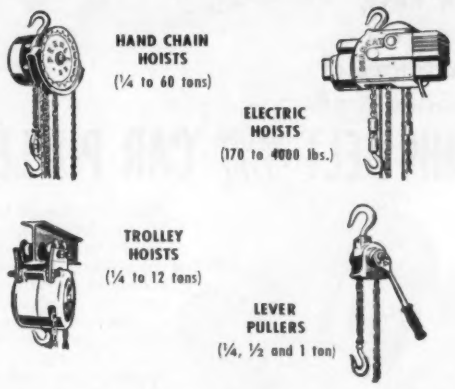
DEEP HOLE DRILLING TOOL attachment fits turret lathes



Accurate, high speed, deep hole drilling is possible with the adjustable, self-contained attachment which fits on turret lathe without interfering with the other positions. Its full rotating electrical power lead avoids entangling cords. Driven by a ¾-hp 110 or 220-v motor, the Model TL tool has a timing belt drive for 1150, 1725, 2490, and 3740-rpm speeds. Drilling capacity is ⅜ in. in steel using a Model BB-MRDA revolving deep hole drilling tool, or up to 1 in. in steel with a Model 70-TLDA nonrevolving drilling tool. Attachment fits Warner & Swasey No. 3, 4, and 5 lathes; Gisholt No. 3 and 4 lathes; and Jones & Lamson No. 3 and 4 lathes. • **Boyar-Schultz Corp.,** 2000 S. 25th Ave., Broadview, Ill.

▲ For more details circle NED-245 D on enclosed inquiry slip ▲

HARRINGTON PEERLESS HOISTS
lift and shift loads easily, help cut costs



Need lifting aids for production operations? Or for intermittent maintenance work? There are Harrington Peerless cost-cutting units for both types of job. And they give safe, dependable service, too. Your local Harrington industrial distributor stocks these economical hoist products. See him or write us for a catalog today.

THE HARRINGTON COMPANY
Plymouth Meeting 16, Pa. • *Makers of Hoists Since 1876*

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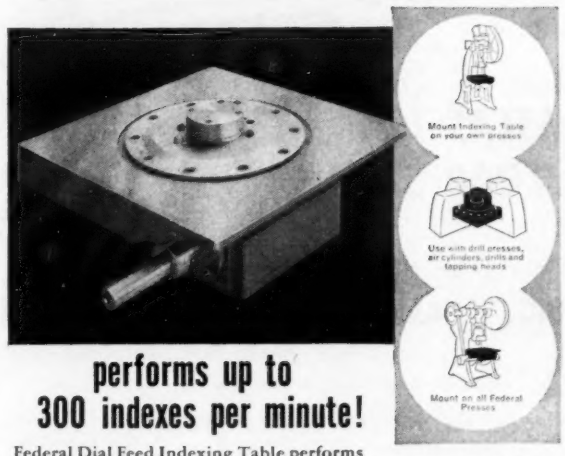
Economical, Versatile, Absolutely Accurate Automation!

Federal Dial Feed Indexing Table



performs up to 300 indexes per minute!

Federal Dial Feed Indexing Table performs hundreds of operations that formerly required specialized, high-priced equipment. Use on your present equipment, on Federal Presses, or independently with air cylinders, drills and tapping heads, or drill presses. Performs up to 20 multiple station operations—delivers up to 300 indexes per minute. The savings are almost unbelievable. Cam-type indexing mechanism assures perfect accuracy—smoothest operation. Write today for complete information.

Federal Press Company, 806 Division Street, Elkhart, Indiana

FEDERAL Open back Inclinable PRESSES
35 Years of Quality Construction
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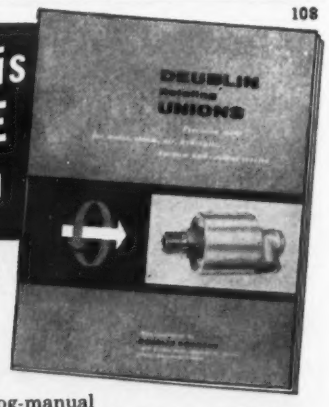
108

Send For This NEW FREE Catalog On



DEUBLIN Rotating UNIONS

A completely new, 20 page illustrated catalog-manual showing all the models of Deublin Rotating Unions for water, steam, air, hydraulic, vacuum and coolant service for the machines you make or use, is just off the press to help you get trouble-free service and reduce your "down-time" and keep maintenance to a minimum. Shown are rotating joints for water and steam service; monoflow and duoflow unions; single and double passage rotating air unions; hi-pressure lo-torque unions; extra capacity air unions; rotating siphon pipe unions; in-the-shaft mounted unions; hydraulic rotating unions and hi-speed coolant unions. Complete with full engineering data, cut-away drawings, plus instructions for installing, lubricating and servicing Deublin unions.

Write for your free copy today.

DEUBLIN COMPANY
1925 STANLEY ST. • NORTHBROOK, ILL.
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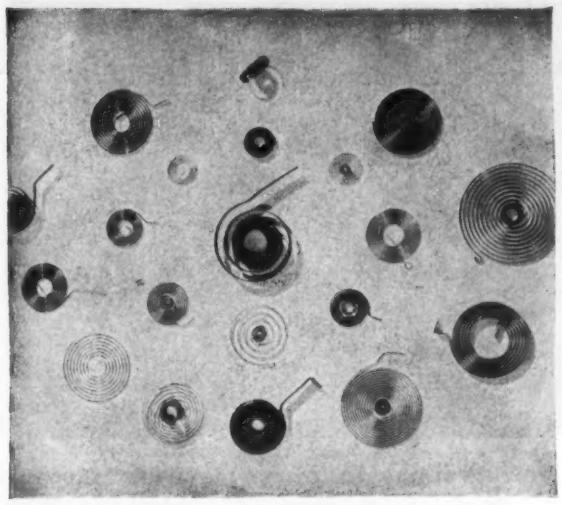

Hairsprings

Manross Division of A.S.C. is one of the oldest makers of hairsprings used in instruments, meters, gauges, watches, etc. Accuracy and dependability assured. Write for hairspring booklet giving helpful design and material selection information.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5825
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NEW . . . COMPACT . . .

A special type of spring

For high loads at minimum deflection

A special type of spring for high loads at minimum deflection. Consists of Belleville washers designed for specific applications and preassembled in a compact unit. Washers can be stacked in series, parallel, or parallel-series depending on load and space requirements. Saves assembly and installation time. For description, write for "Energy Cartridge" pamphlet.

*(Pat. No. 2,482,449)

Associated Spring Corporation
General Offices
Bristol, Connecticut

5832
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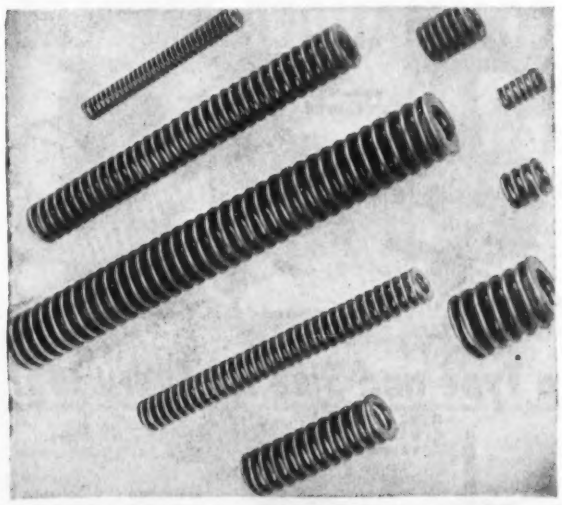

Die Springs

Chrome vanadium die springs in stock in a wide variety of hole and rod sizes, lengths and deflections. Medium, medium-heavy, heavy duty for increased life and reduced down time. Write for list of specifications and prices, and name of nearest distributor.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5820
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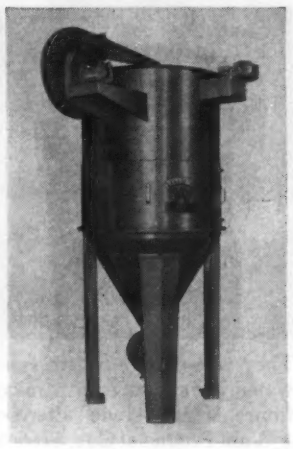
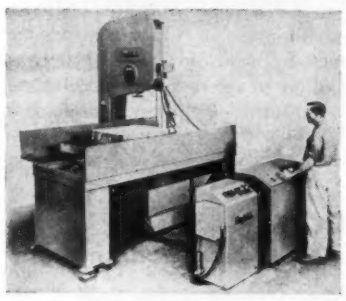
DUST FILTER
improved 285 to 6400 cfm sizes



Improved RJ dust filters in five air capacities from 285 to 6400 cfm feature simplified method for maintaining filtering media porosity. This is achieved by a reverse air plenum rotating in top chamber of the filter. The plenum, pressurized by a centrifugal blower, discharges high velocity, counterflow air into filter sleeves one at a time to remove accumulated dust. With combination of felted filter media and counterflow air action, high filtering rates (air-to-cloth ratios up to 20:1) are achieved at 99.99 per cent efficiencies. Units will filter light or heavy grain loaded airstreams and fine, coarse, abrasive, or nonabrasive dusts with air stream temperatures to 300° F. ● **Day Sales Co.**, 810 Third Ave. N.E., Minneapolis 13, Minn.

▲ For more details circle **NED-252 D** on enclosed inquiry slip ▲

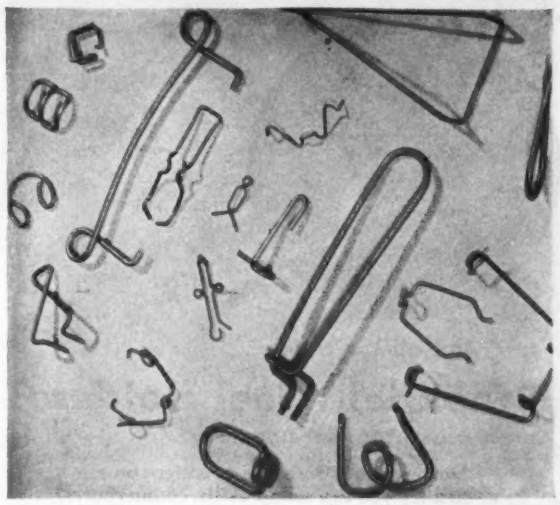
HONEYCOMB MATERIAL CUTTER
uses quenched arc for smooth finish on material with minimum of waste



Honeycomb materials of aluminum, stainless steel, or titanium, and other fragile cellular structures of foil or thin-wall tubing are effectively cut by Electro Band machines. They utilize the quenched arc cutting process that removes only 1/32-in. of material as waste. Resulting finish is comparable to grinding. Modified DoALL band machines sustain an arc at the leading edge of the rapidly moving saw band during the feeding of the metallic material. A flood of coolant quenches the arc, localizing the heat to prevent metallurgical change.

Smallest of three machines, Model 1612-X1, has a 16-in. throat, 12-in. work height, and a 5-kw power supply. Table traverse is 12 in. and feed rates are variable up to 3 fpm. Model 3624-X1 with a 7½-kw power supply has a 35¼-in. throat depth and a 24-in. work height. Table traverse is 43 in. and feed rate is variable up to 8 fpm. Largest machine is Model 2648-X1 with a 26-in. throat depth, 48-in. work height, 10-kw power supply, 48-in. table traverse, and feeds from 0.03 to 11 ipm. ● **DoALL Co.**, 254 N. Laurel Ave., Des Plaines, Ill.

▲ For more details circle **NED-253 D** on enclosed inquiry slip ▲



Wire Forms

Years of specialized experience in producing clips, clamps, collars, snap rings, retainers, bearing rings—or any wire form. Automatic or manual production determined by size of order. Let us analyze your design for economical production.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5824
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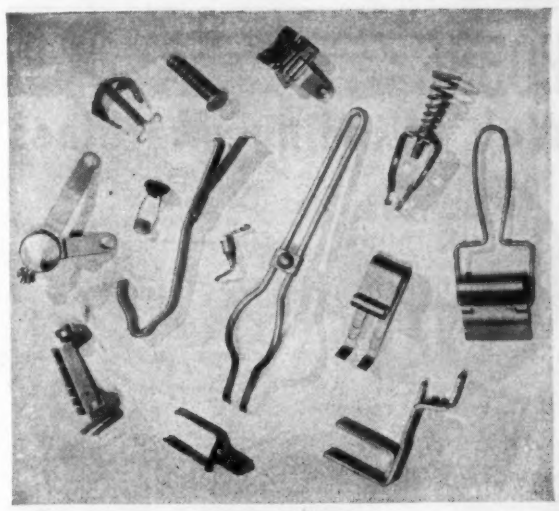

Spring Assemblies

Partial or complete assemblies delivered ready to use. Combinations of round or flat wire springs, wire forms, stampings . . . punched, riveted, spot welded or assembled under spring tension. Springs also assembled with parts furnished by customer. Save equipment and labor costs. Use our convenient, ready-to-go facilities.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5829
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Engineering, manufacturing, and sales facilities located coast-to-coast for custom service on all your requirements

BRISTOL, Conn.
Wallace Barnes Division
Dunbar Brothers Division
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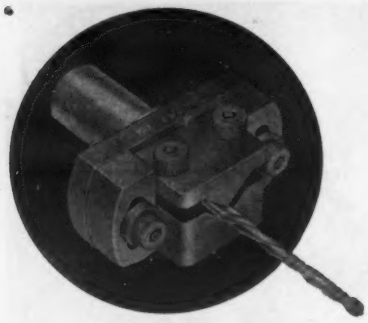
Wallace Barnes Steel Division
Bristol, Conn.
High Carbon Strip Steel

Associated Spring Corporation
General Offices
Bristol, Connecticut



in half the time

Brookfield Tool Holders

make tool set-ups easy!

Now, without bushings or collets, on the first try you can set up drills, counterbores, reamers or cutters for almost any machining operation. Precision ground V-jaw vises, Brookfield Tool Holders make even toughest set-ups a cinch. With one wrench, insert the tool, tighten the jaw, then float the tool into dead center position and tighten. It's as easy as that!

FREE! *Descriptive illustrated brochure, plus price and specification lists.*

BROOKFIELD, INCORPORATED
STOUGHTON 114, MASSACHUSETTS

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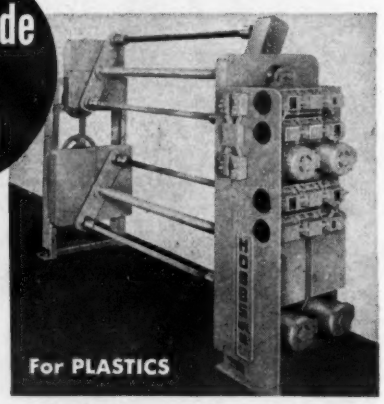
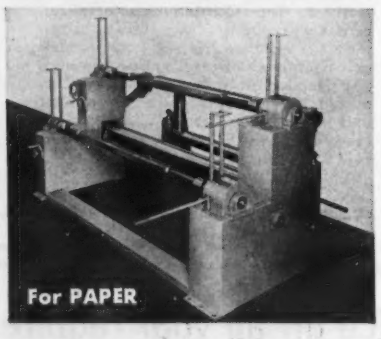
HOBBS
Web Winding Machines

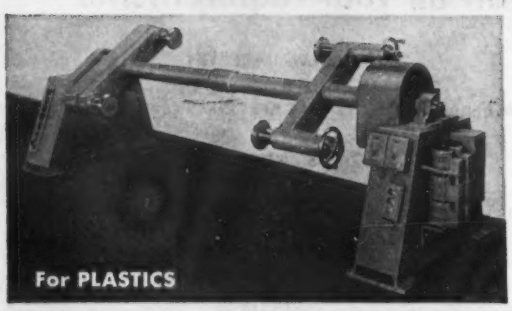
Tailor-Made for the Job



Double Turret Extruder Winding Machine specially designed for prominent plastics manufacturer.



Staggered 2-Shaft Winding Machine specially designed for nationally known tag and label manufacturer.



Shaftless Adjustable Winding Machine specially designed for leading chemical manufacturer.

What are your web winding requirements? Tell us in detail. Hobbs can fit the design to the job to give you

MORE FOR YOUR MONEY

WEB WINDERS • WINDING MACHINE
SLITTERS • SHEARS (Hand & Power)
PRODUCTION CUTTERS
DIE PRESSES • AUTOGIL CUTTERS

HOBBS *Manufacturing Company*
41-D Salisbury St., Worcester 5, Mass.

Branch Offices and Representatives in Irvington, N. J. Chicago, Cleveland, Louisville, Greenville, S. C., Toronto, Los Angeles and other Principal Cities

143-9

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COMPRESSED AIR DRYERS
10,000, 11,000, and 11,500 cfm sizes

Three sizes added to line of self-contained Van-Air compressed air dryers bring the total to 33 sizes for handling any volume from total air for the entire plant down to minimal air for small operations. The three sizes are rated 10,000, 11,000, and 11,500 cfm at 100 psi. They adapt to any air system and intercept residual water-vapor along with microscopic abrasives and acid fumes which elude aftercooler, receiver, and filters. • Van Products Co., 5766 Swanville Rd., Erie, Pa.

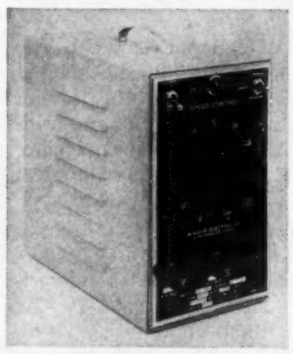
▲ For more details circle **NED-260 D** on enclosed inquiry slip ▲

AIR PUMP
is lightweight motor driven unit

Though designed to supply air to gyroscope bearings, this welded diaphragm bellows type air pump is also suited for other uses. In recirculation service, it delivers uncontaminated air. Pump is rated 2 psi at 2 liters per minute. Motors for operation on 200-v 400-cycle or 115-v 60-cycle ac are standard. Compact hypocycloidal drive mechanism converts rotary motion to reciprocating to actuate the sealed bellows type piston. • Breeze Corp., 700 Liberty Ave., Union, N. J.

▲ For more details circle **NED-261 D** on enclosed inquiry slip ▲

MOTOR SPEED CONTROLS
for 1/4 and 1/2-hp shunt-wound motors

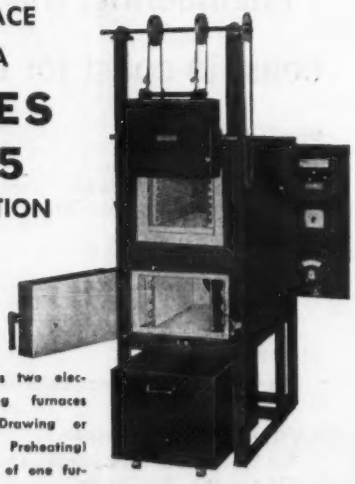


No warm-up time is required by this tubeless, heavy-duty speed control for 1/4 and 1/2-hp shunt-wound motors. Full-wave control can be switched from forward to reverse at any motor speed setting, and speed range is 18:1 at full rated motor torque. Reversal occurs in about 1/2 second without strain on motor or control. Device features an internal terminal strip for adapting limit switches and a remote forward-brake-reverse switch. The compact 16-lb unit is offered for either 115 or 230-v 60-cycle input. • Minarik Electric Co., 224 E. Third St., Los Angeles 13, Calif.

▲ For more details circle **NED-262 D** on enclosed inquiry slip ▲

SAVE SPACE WITH A

SERIES 8055
COMBINATION



The Series 8055 is two electric heat treating furnaces (Hardening and Drawing or Hardening and Preheating) in the floor space of one furnace. The 8055 is made in nine standard sizes or to your specifications. Furnaces operate on standard line voltage . . . no transformer necessary . . . all controls included. Each furnace is independently controlled permitting two operations to be performed at the same time. Write, wire or call . . .

LUCIFER FURNACES, INC.

Neshaminy 15, Penna. • Diamond 3-0411

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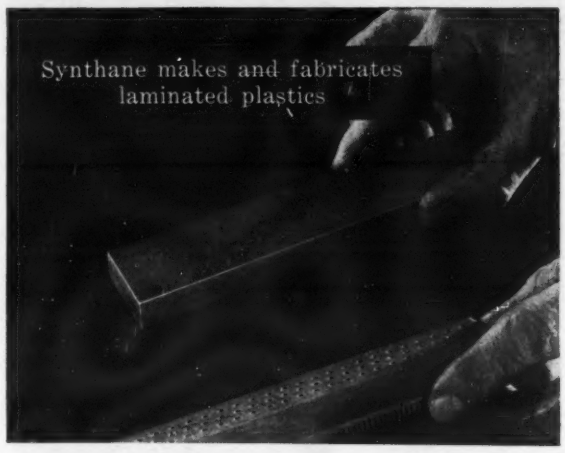

Worried about fabricating plastic laminates!

There's very little point in fabricating laminated plastics in your own shop. There are many reasons why. Selection of the proper grade of material and the proper form (sheet, rod, tube) for your part is a job for us. Then we can relieve you completely from responsibility for errors in dimensions, machining and tolerances, and for waste and delays. Get top quality at the right price. Write or phone for quotation.

WRITE FOR NEW FABRICATION BOOKLET. It's a must for every buyer of laminated plastics parts.

SYNTHANE CORPORATION
NE RIVER ROAD, OAKS, PENNA.
Sheets • Rods • Tubes • Fabricated Parts
Molded-laminated • Molded-macerated

SYNTHANE

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DEMING "MOTOR-MOUNT" CENTRIFUGAL PUMPS

STAINLESS STEEL SHAFT SLEEVE protects pump shaft and insures longer life

Pumps range from 1 1/2" to 5" discharge...capacities to 1200 gallons per minute with 1-40 H. P. motors. Write for Bulletin No. 4200-A.

Just one of the many Deming pump features that provide longer life and lower operating costs

The DEMING Co.
406 BROADWAY • SALEM, OHIO

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COMMANDER TAPPERS

a Type and Size for Every Job!

See us at Booth # 313 ASTE Show, Detroit

Commander Tappers are made in 10 models—each designed to handle tapping jobs over a wide range. From the Commander Tapper line, you can select the right unit to give you the exact performance your job requires. Whichever Commander Tapper you select, you will get unequalled performance and tapping economy. Sold and serviced by drilling and tapping specialists. Write for the Commander Production Tool Catalog and name of nearest Distributor.

101

Commander MFG. CO.
4220 WEST KINZIE STREET • CHICAGO 24 ILLINOIS

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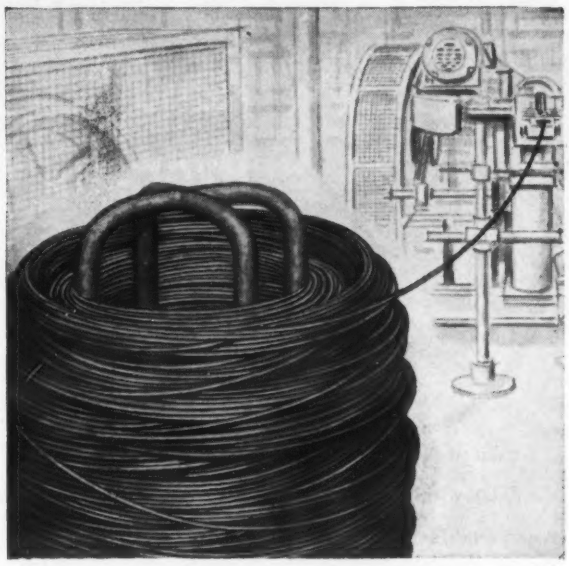

7504

CF&I WIRE
Packaged for your production

Reduce downtime and increase production efficiency with CF&I Wire, in all sizes, types and finishes, packaged in extra long lengths. Write for *Catalog 704 Rev.*

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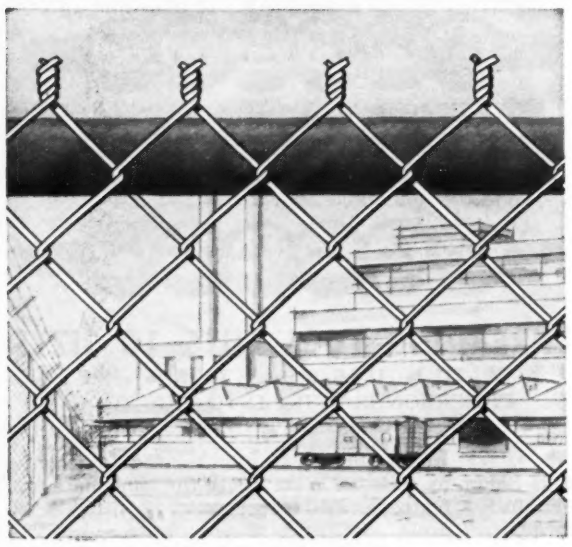

REALOCK...
The fence that says stop

Your insurance against pilferage, vandalism, arson . . . long-lasting Realock Fences. Made of galvanized steel or aluminum with or without barbed wire tops. All types described in *Catalog F-915.* 7502

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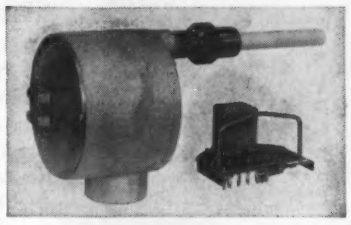
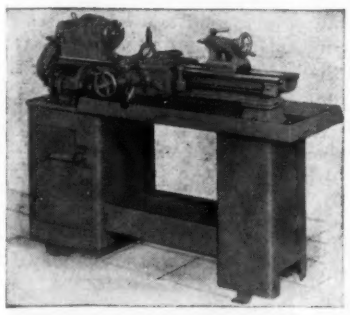
ELECTRONIC LEVEL CONTROL
transistorized, explosionproof unit



Solid state circuit improves sensitivity and stability of Model B-07 Electr-O-Probe level control for high and low level detection of liquid, granular solid, and liquid/liquid interfaces. The transistorized model has unitized, explosionproof construction with optional failsafe feature, complete with plug-in RF oscillator diode rectifier (shown at right). Complete unit for 110-v ac operation is priced at $151, whereas both 12 and 24-v dc models are listed for $136. • **Instruments, Inc.**, Box 556, Tulsa, Okla.

▲ For more details circle **NED-270 D** on enclosed inquiry slip ▲

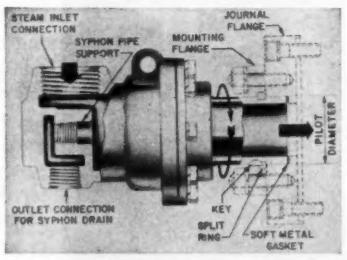
10-IN. LATHES
feature redesigned rigid legs



Welded, reinforced construction is used in redesigned legs of 10-in. lathes to provide rigidity and deflection-free support. The columnar type legs are fabricated of heavy gage steel. Headstock leg contains the underneath motor drive which has to be disengaged before the leg can be opened. The two legs are connected by a deep U-section storage tray on both engine and toolroom lathe models. Chip and oil pans are optional. • **South Bend Lathe, Inc.**, 425 E. Madison St., South Bend 22, Ind.

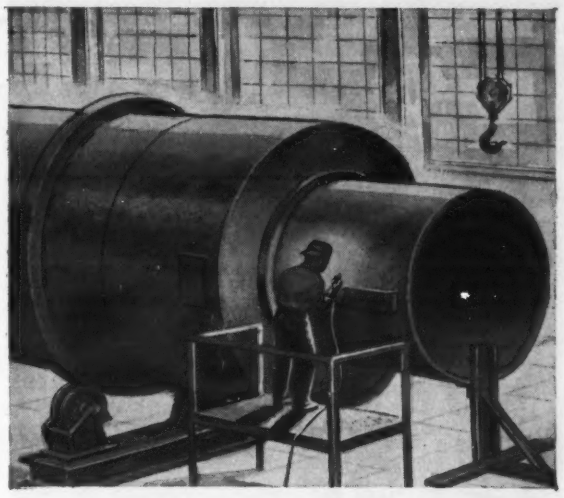
▲ For more details circle **NED-271 D** on enclosed inquiry slip ▲

ROTARY JOINTS
mounting flange eases attachment



Attachment of this Type CF rotary joint to rotating drum, dryer, or roll is simple matter with its mounting flange. Soft metal gasket at end of rotating sleeve seals the joint against leakage. Seal is self-adjusting for wear. Joints are made in 2, 2½, and 3-in. sizes for up to 200-psi saturated steam or 400-psi cold working pressure. Oil up to 500° F and under 100 psi can also be handled. All sizes can be used for either single or siphon flow service. • **Barco Mfg. Co.**, Dept. J-16, 500 Hough St., Barrington, Ill.

▲ For more details circle **NED-272 D** on enclosed inquiry slip ▲



CF&I-CLAYMONT
Steel Plate Products
Manufactured to your exact requirements

Carbon, alloy and stainless-clad steels in plate form or fabricated into spun and pressed heads and other plate parts. For further information write for specific catalogs. 7505

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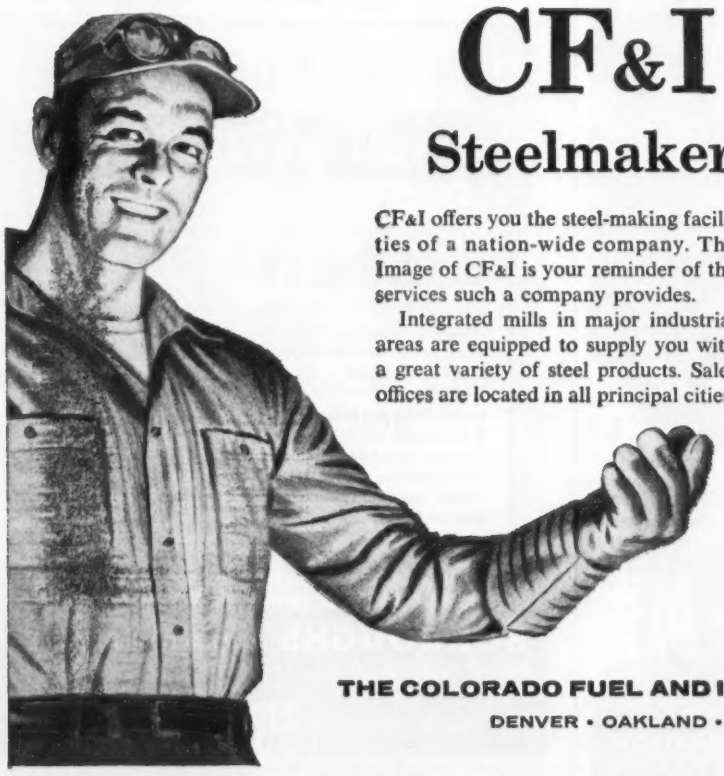
CF&I-WICKWIRE SPRINGS
Designed to your specifications

CF&I engineers will help you design the correct spring for any application. Compression, Extension, Torsion, Flat, Special. Get details in *Catalog S-500.* 7501

▲ For more details circle **NED-274 D** on enclosed inquiry slip ▲



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Steelmaker for Industry

CF&I offers you the steel-making facilities of a nation-wide company. The Image of CF&I is your reminder of the services such a company provides.

Integrated mills in major industrial areas are equipped to supply you with a great variety of steel products. Sales offices are located in all principal cities.

Over 40 well-stocked warehouses from coast to coast assure quick and efficient delivery on all orders.

For an outline on the range and diversification on CF&I Steel Products, write for Catalog G-50 Rev. For more direct service and information, contact your local CF&I sales office.

Plants at: Pueblo, Colo. • Oakland and South San Francisco, Calif. • Buffalo, N. Y. • Claymont, Del. • Palmer, Mass. Birdsboro, Pa. • Roebling, N. J. • Trenton, N. J.

7500

THE COLORADO FUEL AND IRON CORPORATION

DENVER • OAKLAND • NEW YORK

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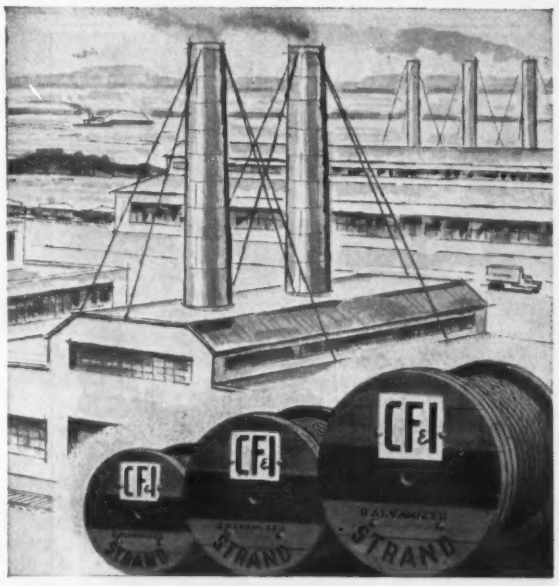

CF&I Galvanized Steel Strand gives sure support

Manufactured to ASTM Specifications A-122, A-363 or to your own specifications in 7 and 3-wire constructions. Write for *Catalog WFR-264.* 7503

▲ For more details circle **NED-275 D** on enclosed inquiry slip ▲

it's BORROUGHS for
SHOP EQUIPMENT

STOP shopping around for shop equipment. Borroughs has everything you want — rugged quality — top design and efficiency — outstanding value. There's a wide selection of units and accessories. **Send for catalog.**

BORROUGHS MANUFACTURING COMPANY
OF KALAMAZOO
A SUBSIDIARY OF THE AMERICAN METAL PRODUCTS COMPANY OF DETROIT
3072 NORTH BURDICK ST. amp KALAMAZOO, MICHIGAN

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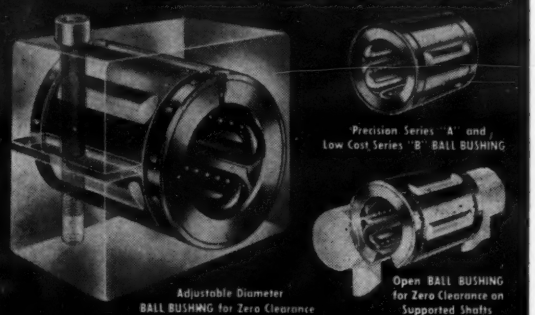
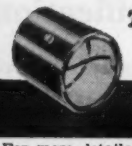
NOW! *Adjustable Diameter and Open*
THOMSON BALL BUSHINGS



The BALL Bearing for all your LINEAR MOTIONS

LOW FRICTION • ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE • LASTING ALIGNMENT

The various types cover a shaft diameter range of ⅛" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.



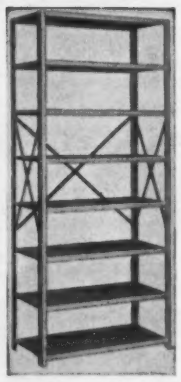
THOMSON INDUSTRIES, Inc.
Dept. C, MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings
Sleeve Bearings of DuPont NYLON

▲ For more details circle **NED-277 D** on enclosed inquiry slip ▲

it's BORROUGHS for
STEEL SHELVING

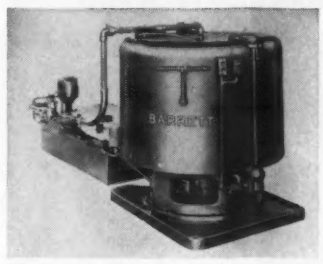
LOOK what you get in Borroughs open and closed steel shelving—America's most simple, most flexible, most rapidly assembled shelving with many exclusive features —shelving that saves you time and money from the very start of its installation. Get the complete Borroughs story . . . **send for catalog.**



BORROUGHS MANUFACTURING COMPANY
OF KALAMAZOO
A SUBSIDIARY OF THE AMERICAN METAL PRODUCTS COMPANY OF DETROIT
3072 NORTH BURDICK ST. amp KALAMAZOO, MICHIGAN

▲ For more details circle **NED-278 D** on enclosed inquiry slip ▲

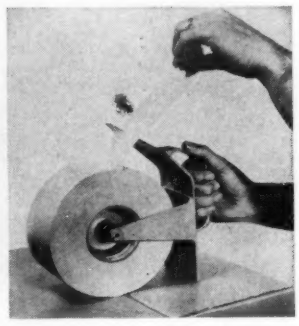
CENTRIFUGAL IMPREGNATOR
for capacitors, coils, yarns



Varnish, wax, asphalt, oil, and other saturants are pushed into capacitors, armatures, yarns, electrical coils, and other porous and semiporous objects by this impregnator. At the same time air and other contaminants are pushed out. Device utilizes centrifugal impregnation by developing a pressure variance from 100 psi at the periphery to 0 psi at the center of the chamber. Special models allow use of volatile, electrolytic, and hot saturants. • **Leon J. Barrett Co.**, Box 378, Worcester 1, Mass.

▲ For more details circle **NED-279 D** on enclosed inquiry slip ▲

TAPE DISPENSER
handles rolls up to 3 in. wide



Cut-off blade to shear through glass-filament reinforced tape is built into this dispenser for extra-wide rolls of pressure-sensitive tape. Made of aluminum, it accommodates rolls up to 3 in. wide. Rolls are easily replaced. Tapebinder tape is available in widths from ⅜ to 3 in. and 60-yd lengths. • **A. J. Gerrard & Co.**, 1950 Hawthorne Ave., Melrose Park, Ill.

▲ For more details circle **NED-280 D** on enclosed inquiry slip ▲

WALL-MOUNTED COFFEE BAR
serves 60 cups per hour

This wall-mounted water cooler and Coffee Bar provides instantaneous 180° F hot water for making up to 60 cups of coffee per hour in addition to dispensing cool fountain water. Easily kept clean, and taking up no floor space, the dispenser is offered in 6, 11, and 16-gal capacities. Each is provided with the two-stream mound-building projector and an anti-squirt feature in the cold drinking fountain. Units meet health and sanitary standards. • **Halsey W. Taylor Co.**, 1259 N. Park Ave., Warren, Ohio.

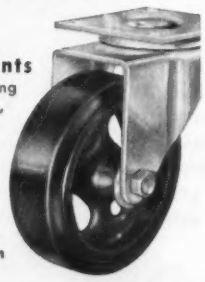
▲ For more details circle **NED-281 D** on enclosed inquiry slip ▲

FREE NEW 16 PAGE CATALOG

Send for our new fully illustrated catalog showing the complete line of Midwest Industrial Casters. Explains uses, types, construction. Easy to read charts give complete specifications.

Made To Meet Your Requirements
Thousands of Midwest Casters are being used by Automotive, Aircraft Industries, Stamping Plants, General Construction Companies, Foundries, Bakeries and Warehouses.

They Are Built Better—Work Better
Years of on-the-job service have proven Midwest Casters to be dependable and economical. You save when you buy them . . . You save when you use them.



PressCoin now available for Scaffolds. 5"-6"-8" Wheels and *Foot Operated* Brake-Lock

New lock securely holds both wheel and swivel rigidly in position. Available in 5"-6"-8" stem-type or with regular top plate.

MIDWEST PRECISION CORPORATION
JACKSON, MICHIGAN

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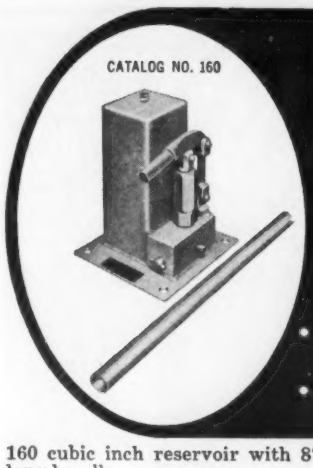

Hand Hydraulic Pumps
• Single and Double Designs to 20,000 psi
• With or Without Reservoir

160 cubic inch reservoir with 8"x 8" base plate and 18" long handle.

Available with optional size pistons ⅜", ½", ¾", 1" and 1½".

We specialize in the manufacture of hand pump units which operate in temperatures from −65° F. to +160° F. and with any capacity reservoirs required. Pumps can be furnished on special order with custom seals to handle various aircraft types of fuels such as Pydraul, Skydrol, Oronite, etc.

The single pump with ½", ¾", 1" or 1½" piston is now available in stainless steel.

for additional information write:

WILLIAM S. PINE
hydraulic hand pumps for 1001 uses
1635 East 22nd St., Los Angeles 11, Calif.

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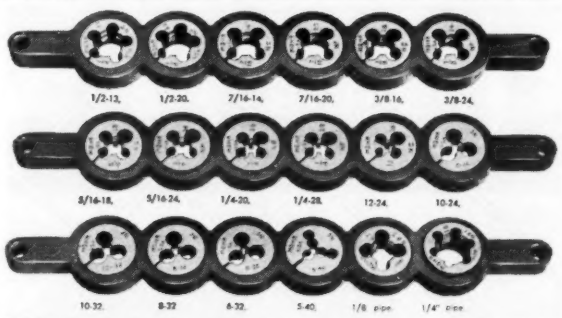


THREADING TOOL CUTS 18 SIZES
½" TO ⅛" U.S.S. & S.A.E. ⅛" & ¼" PIPE
PRECISION IS BUILT INTO THIS TOOL REQUIRING LESS SKILL TO USE.

Cuts threads in minutes that otherwise take hours, as each die is set ready for immediate use (Exclusive feature). Will cut class 2-fit threads on *lathe, drill press, vise,* or as a *wrench.*

Gives shop better control of small tools. Reduces Pilferage. This maintenance tool will save you money in any shop. Will reduce parts inventory.

1-SET "MOHR THREADING TOOLS" $39.00

Three precision holders of high strength aluminum with 18 high grade adjustable dies. Sizes as shown above. All orders sent on 10 day approval basis.

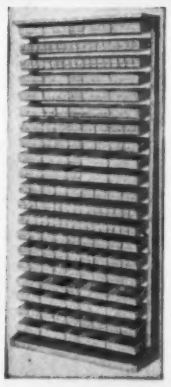
Write for FREE information on the many time and money-saving applications of this new tool.

MOHR TOOL & MFG. CO., Box 63G Maywood, Ill.

▲ For more details circle **NED-284 D** on enclosed inquiry slip ▲

it's BORROUGHS for
small parts BINS

Listen . . . Borroughs "Handee Andee" small parts bins offer maximum storage in minimum space — PLUS —complete flexibility, accessibility, visibility. The 3 standard models hold 4 sizes of bin boxes in your own arrangement. Bin boxes have many features, too. **Send for catalog.**



BORROUGHS MANUFACTURING COMPANY
OF KALAMAZOO
A SUBSIDIARY OF THE AMERICAN METAL PRODUCTS COMPANY OF DETROIT
3072 NORTH BURDICK ST. amp KALAMAZOO, MICHIGAN

▲ For more details circle **NED-285 D** on enclosed inquiry slip ▲

NEW:
"Big" drilling jobs made easy

Mounted on an overhead track, this custom "radial drill" handles jobs too big for conventional drilling—in production runs too small to justify expensive, special tooling. You provide this flexibility by combining these standard Delta components:

- 8-ball bearing traveling carriage
- husky 33" column
- raising mechanism
- choice of four Delta 20" drill heads

Another example of how rugged, versatile and highly accurate Delta Industrial Tools are cutting metalworking costs.

See your Delta Industrial Distributor

(listed under "TOOLS" or "MACHINERY") for information on the world's most *complete* drill press line. For FREE catalog showing 61 Delta machines, 302 models, over 1400 accessories, write: Rockwell Manufacturing Company, Delta Power Tool Division, 626D N. Lexington Ave., Pittsburgh 8, Pa. In Canada: Rockwell Manufacturing Company of Canada, Ltd., Guelph, Ontario.

DELTA INDUSTRIAL TOOLS
another fine product by
ROCKWELL

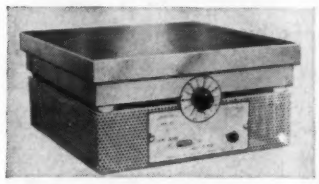
▲ For more details circle NED-286 D on enclosed inquiry slip ▲

RESPIRATOR
with throw-away filter

Lightweight Respir - ette respirator with plastic base throw - away filter protects user against nuisance dusts and paint overspray. The one-size plastic body fits all faces comfortably and does not interfere with the wearing of spectacles. Unit is washable and nonirritating. List price is $1.05 each in lots of 300 or more. • **Pulmosan Safety Equipment Corp.**, 644 Pacific St., Brooklyn 17, N. Y.

▲ For more details circle NED-288 D on enclosed inquiry slip ▲

HOT PLATES
two sizes have variable temperature



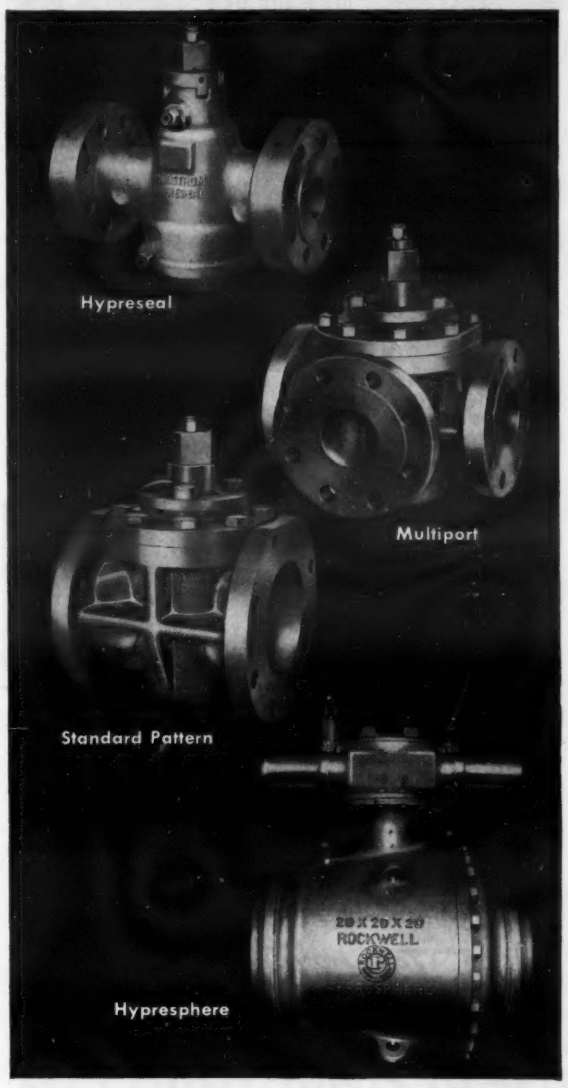
Any set temperature within the range of Type 2200 Thermolyne hot plates is held within ±5° F, regardless of line voltage and ambient temperature fluctuations. Temperature is closely and steplessly controlled from 10° F above ambient to 700° F. Line consists of 12 x 12-in. and 12 x 24-in. models for 115 or 230 v operation. Case remains cool to protect the user and table tops. Cast aluminum top plate is ribbed to minimize warping. • **Thermo Electric Mfg. Co.**, 484 Huff St., Dubuque, Iowa.

▲ For more details circle NED-289 D on enclosed inquiry slip ▲

DIGITAL READOUT DEVICE
has its own retentive memory

One-plane, in-line presentation of digital displays is provided by this Slide Plate readout unit which operates from binary coded decimal input. It has its own retentive memory, and operates from transistorized equipment. Unit does its own translating without auxiliary relays or diodes. It stores and displays the last signal entered into it until commanded to accept and display a new input. The Slide Plate has suitable check-back and verification circuits as well as storage readout so that digits previously read into a bank of display units can be read back into the source equipment at a later time. Unit is available with 16, 40, or in special cases, with up to 64 separate characters. • **Industrial Electronic Engineers Inc.**, 5528 Vineland Ave., North Hollywood, Calif.

▲ For more details circle NED-290 D on enclosed inquiry slip ▲



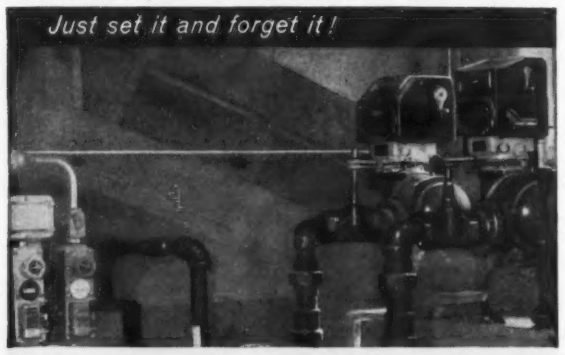
SAVE YOUR VALVE DOLLARS
Specify From The Only Complete Line Of Lubricated Plug Valves

You'll save valve dollars in two important ways by specifying Rockwell-Nordstrom *lubricated* plug valves: 1. Lubrication stops wear, assures long life at lower cost. 2. They're lubricant sealed for positive shut-off; prevent costly loss or contamination. And, Rockwell-Nordstrom is the world's *only* complete line of lubricated plug valves with sizes, pressures and special operating accessories to give you the exact valve to fill your needs.

Get Free Literature or have a Rockwell Field Engineer call by writing: Rockwell Manufacturing Co., Pittsburgh 8, Pa. Canadian Valve Licensee: Peacock Brothers Limited.

ROCKWELL-Nordstrom VALVES
another fine product by
ROCKWELL

▲ For more details circle NED-292 D on enclosed inquiry slip ▲



Get automatic control of liquids used in processing

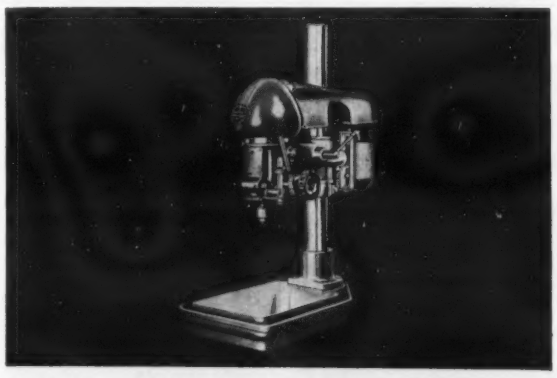
The Rockwell meters pictured are used to control batch mixing. They shut off automatically when a pre-determined volume of liquid has been measured. Ticket printing registers verify quantities.

With a meter system you'll be sure of uniformity in your end product. Closed piping prevents contamination; safely handles volatile liquids. Most important, metering saves time and money.

There's a Rockwell liquid meter for practically everything that will flow in pipe including *stainless steel* meters for corrosive services. For full facts write: Rockwell Manufacturing Company, Pittsburgh 8, Pa. In Canada: Rockwell Manufacturing Company of Canada, Ltd., Guelph, Ontario.

INDUSTRIAL METERS
another fine product by
ROCKWELL

▲ For more details circle NED-287 D on enclosed inquiry slip ▲



NEW! WALKER-TURNER 14" HI-SPEED DRILL PRESS

Especially engineered for small hole drilling. Gives you many famous Walker-Turner "Light Heavyweight" quality features. Speeds up to 12,000 RPM. Available in single spindle or multiple spindle models, with production table or as components for special set-ups. Ask your W-T Distributor for details (he's listed under "TOOLS" or "MACHINE TOOLS" in the Yellow Pages). Write for FREE literature: Rockwell Manufacturing Co., Walker-Turner Division, Dept. WD-45, 400 N. Lexington Ave., Pgh. 8, Pa.

WALKER-TURNER
"LIGHT-HEAVYWEIGHT" MACHINE TOOLS
another fine product by
ROCKWELL

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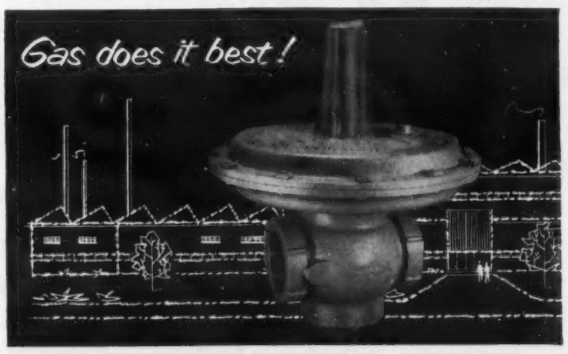

HOW TO IMPROVE YOUR COMBUSTION CONTROL AND SAVE!

Gas burning furnaces, kilns, boilers and ovens all need *good constant pressure regulation* to obtain *good combustion* at the burners. With precise combustion control you'll get uniform quality in your end products . . . and maximum fuel economy, too.

Rockwell makes a complete line of industrial regulators for either low or high pressure burner control. If fluctuating pressures are your problem write us, Rockwell Manufacturing Company, Pittsburgh 8, Pa. In Canada: Box 420, Guelph, Ontario.

GAS PRESSURE REGULATORS
another fine product by
ROCKWELL

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DEEP HOLE DRILLING
Single or Multiple Spindle

- STEP AND REPEAT ACTION—*NO SHOCK*
  The number of steps possible is infinitely variable—to satisfy any requirement.
- Reduces breakage and over-heating of drills.
- Can be added to existing machine, or used to replace old style units.
- Adaptable to any single or multiple—spindle application.
- Self contained—Compact

Available in from 1 to 5 H.P. —up to 12" Stroke

Typical example of a multiple spindle unit drilling in medium hard cast iron.

A Drillunit—5 H.P. Capacity will drive
10 ¼" dia. drills
or 6 ⅜" dia. drills
or 4 ½" dia. drills
or 3 ⅝" dia. drills
or 2 ¾" dia. drills
or 1 1" dia. drill

Write for Literature

DRILLUNIT, INC.
HYDRAULIC DRILL UNITS
3267 Wight Street • Detroit 7, Michigan

For more details circle NED-294 D on enclosed inquiry slip

Tempilstik°
*temperature indicating crayons**

*Also Tempil° Pellets and Tempilaq° (liquid form)

Tempilstik°—a simple and accurate means of determining preheating and stress relieving temperatures in welding operations. Widely used in all heat treating—as well as in hundreds of other heat-dependent processes in industry. Available in 80 different temperature ratings from 113°F to 2500°F . . . $2.00 each.

Send for *free* sample Tempil° Pellets. State temperature desired . . . Sorry, no sample Tempilstiks°.

Most industrial and welding supply houses carry Tempilstiks° . . . If yours does not, write for information to:

ADVERTISING DIVISION

Tempil° CORPORATION
132 West 22nd St., New York 11, N. Y.

Visit us at Booth 407, AWS Welding Show, Great Western Exhibit Center, Los Angeles, Calif., April 26-28

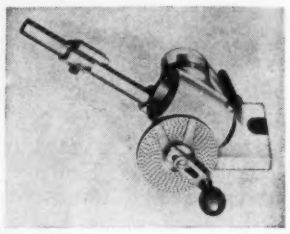
For more details circle NED-295 D on enclosed inquiry slip

SELF-CONTAINED SPRAYER
for paint, oil, and other fluids

Any liquid thinned to spraying consistency can be applied with the Pee-Wee sprayer. Paints, lacquers, oil, lubricants, dopes, or insecticides in the glass jar are sprayed when trigger is depressed, releasing an aerosol propellant from a replaceable pressurized container. Each can of gas sprays about 1 qt, depending upon weight and viscosity of the fluid. Base plate prevents sprayer from tipping when loaded. changing product or paint color, is accomplished by changing jars. Complete unit is $3.95, refill propellant container is $1.79, and extra glass jars are 12 cents. • Thome-Mossman Co., 1111 N. Franklin St., Chicago 10, Ill.

For more details circle NED-296 D on enclosed inquiry slip

DIVIDING HEAD
aids small parts production



Production of various small precision parts with minimum setup time is facilitated by this dividing head which can be used on rotary tables, milling machines, and surface grinders. Spindle has 1-in. capacity with 5 C collets, assures concentricity within 0.0002 in., swings 360 degrees in a vertical plane, and indexes to 1 min of arc. An outboard center is used to support slender work at any angle, and ball thrust bearing drawnut gives maximum chucking force. • Falcon Machine & Tool Co., 209 Concord Turnpike, Cambridge 40, Mass.

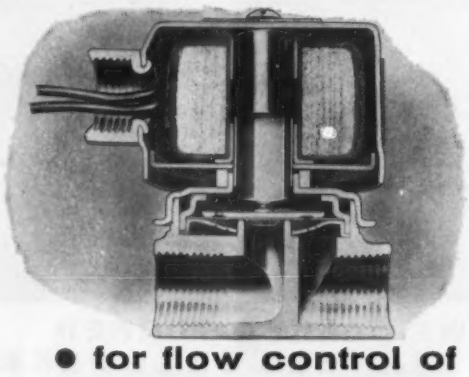
For more details circle NED-297 D on enclosed inquiry slip

TOWING TRACTOR
4-hp unit develops 630-lb drawbar

Powered by a 4-hp gasoline engine, this 750-lb Tow - Mite towing tractor develops 630-lb drawbar pull. It is also available with a 7-hp engine that develops about 1000-lb drawbar pull. Tractor has dual rear tires, three speeds forward and one reverse, low center of gravity, and will turn on a 38-in. radius. Clutch engages automatically in the heavy-duty Borg-Warner transmission. Average fuel cost is reportedly 60 cents for 8 hr. Engines can be converted to liquid propane. • Northwestern Motor Co., Eau Claire, Wis.

For more details circle NED-298 D on enclosed inquiry slip

unlimited applications!



• for flow control of water, air, low pressure steam, brines, light oils, gases.

JE INDUSTRIAL SOLENOID VALVES

5/16" to 1-1/2" Port Sizes—1/4" to 1-1/2" N.P.T. Connections
Write for information bulletin today.

Controls Division
JACKES-EVANS MANUFACTURING COMPANY
4427 Geraldine Ave., St. Louis 15, Mo.

For more details circle NED-299 D on enclosed inquiry slip

ENGINEERED RUBBER

Garlock molded, extruded, die-cut, and metal-bonded rubber parts are subjected to over twenty exhaustive tests before and during manufacture to assure they are right for the job. Scientific measurements like these using ASTM methods, plus quality control throughout production, assure you of the finest molded and extruded rubber parts available. Special attention is given compounds which must meet military and SAE-ASTM specifications. Whatever rubber your design calls for, Garlock has the answer for you. Find out more by contacting your Garlock representative, or write The Garlock Packing Company, Palmyra, New York.

GARLOCK

Canadian Division: The Garlock Packing Company of Canada, Ltd.

Plastics Division: United States Gasket Company.

Order from the Garlock 2,000 ... two thousand different styles of Packings, Gaskets, Seals, Molded and Extruded Rubber, Plastic Products

For more details circle NED-300 D on enclosed inquiry slip

Six machines protected from dust by Torit for **$666.15**

This Torit Dust Collector, Model 219FM, complete with accessories, was installed by the Mohr Lino Saw Co., Skokie, Ill., to protect 3 belt sanders and 3 other grinders (2 grinders hidden from view) from destructive dust—at a total cost of just $666.15!

After one year's operation, Mohr Lino Saw says this about their *low-cost* Torit installation: "The Torit installation has kept our shop *cleaner*, our operators *happy*, and *protected vital* machinery."

You too can achieve greater machine protection and cleaner working conditions by trapping dangerous or valuable dust *at its source* with a completely *self contained* and *portable* Torit Dust Collector. For full details write to:

TORIT MANUFACTURING CO.
Dept. 203; 1133 Rankin Street, St. Paul 16, Minnesota

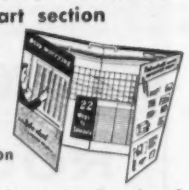
For more details circle NED-301 D on enclosed inquiry slip

"Slickest visual control..."

states *Factory* magazine. Entries made directly with marking pencil on a rolling "Mylar" sleeve which *moves with time,* bringing deadlines constantly closer. Entries easily erased.

Send for ***FREE GUIDE to Control Methods***
with full-scale, sample chart section

Shows how Rol-a-chart controls 22 different items: orders, production, data processing, maintenance, dispatching, sales, etc. Also expert consultation service with no obligation.



Rol-a-chart Division

Conley, Baltzer & Steward, 494 Jefferson Street, San Francisco 9

For more details circle NED-302 D on enclosed inquiry slip

Increase Your Production Capacity the Easy, Low-Cost Way! Use the . . .

Alcoa JOBBING DIVISION!

In a production jam because of temporarily inadequate facilities? Not tooled up for components you'd like to be making? Need specialized equipment or personnel?

Alcoa's Jobbing Division can solve any or all of these problems . . . save you money and time . . . give you the service of all the metal-working machines and fabricating facilities you need *without* capital investment . . . offer engineering and design help . . . and can produce it for you!

For information, see your nearest Alcoa sales office. (For a free, 16-page booklet describing Alcoa's Jobbing Division facilities, check the coupon at the bottom of this page.)

Your Guide to the Best in Aluminum Value ALCOA ALUMINUM CALL YOUR NEAREST ALCOA SALES OFFICE!

▲ For more details circle NED-303 D on enclosed inquiry slip ▲

For Bearings and Bushings That Cost Less, Give More and Last Longer . . .

Alcoa Aluminum BEARING STOCK!

Need bearing stock for bushings and bearings? Your Bunting Distributor stocks Alcoa® Aluminum Bearing Stock in a warehouse not far from *you!*

Aluminum bearings withstand loads up to 10,000 psi; run as much as 20 degrees cooler than other materials; reduce starting torque. Aluminum is easily machined. It conforms readily to misaligned shafts. It's longer lasting in tough service.

Call your Bunting Distributor now, and start to save money. Like more information? Check the coupon below!

Your Guide to the Best in Aluminum Value ALCOA ALUMINUM CALL YOUR BUNTING DISTRIBUTOR TODAY!

▲ For more details circle NED-304 D on enclosed inquiry slip ▲

Cut Your Fastener Inventory! Get Any Type or Size; High-Strength, Heat-Treated Alloys; Low Prices; Fast Delivery . . . of

Alcoa Aluminum FASTENERS

No need to maintain a big inventory on fasteners. Look in the Yellow Pages for your local Alcoa distributor. He has the largest line of aluminum fasteners available today—Alcoa® Aluminum Bolts, Nuts, Rivets, Machine Screws, Wood Screws, Sheet Metal Screws, Washers, anything you need in standard types and sizes—and offers complete stocks, fast deliveries, lowest prices. Alcoa Aluminum Fasteners are made from corrosion-resistant, fully heat-treated, high-strength alloys with full threads, no burrs. And you'll get *full count* on every order . . . no misfits, "seconds," rejects. No need to stock too many, no need to run short. Call your local Alcoa distributor! (For more data and samples, check the coupon at the bottom of this page.)

Your Guide to the Best in Aluminum Value ALCOA ALUMINUM CALL YOUR NEAREST ALCOA DISTRIBUTOR!

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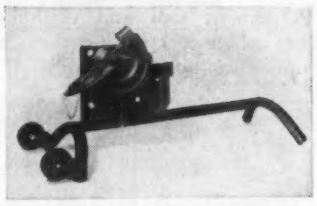
CONDUIT & PIPE BENDER
wheeled stand makes unit portable



Rigid or thinwall, steel or aluminum conduit and pipe can be bent by the improved Chicago bender. Redesign has reduced weight by one-third, and a wheeled stand offers portability and better stability. Leg extension of standard 1-in. conduit or pipe can be used to set at any desired height. Its pawl and pawl release assembly is readily accessible. • **Lidseen of North Carolina, Inc.,** 1108 First St., Hayesville, N. C.

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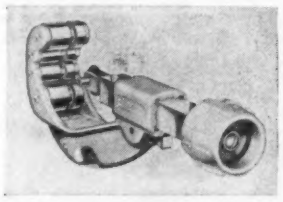
TUBING CUTTERS
for nonferrous tubing and conduit



Feed screws of Ridgid No. 105 and 205 tubing cutters are fully enclosed to prevent jamming with chips or dirt in cutting of copper, brass, and aluminum tubing and thin-wall conduit. Both carry a spare cutter wheel in the handle. Special cutter for No. 205 only also cuts plastic and aluminum pipe. Grooved rollers give easy-to-flare cutoffs without tubing waste. No. 105 cutter has a 1/8 to 1 1/9-in. OD capacity and No. 205 has a 1/8 to 2 3/8-in. capacity. Both have a fold-in reamer and conform to Federal specifications. • **Ridge Tool Co.,** Box 670, Elyria, Ohio.

▲ For more details circle NED-307 D on enclosed inquiry slip ▲

BOILER SAFETY DEVICE
is fuel cut-out and low alarm

Fuel cut-out and low alarm, dual fuel cut-out, or dual fuel cut-out and low alarm can be provided by the Levalarm EA - 100P boiler or tank safety device. It combines float action and electrode-operated functions in a common water chamber. Float action operates a switch through a permanent magnet and special armature, whereas one or two electrodes located at opposite end of the alarm's body serve to release fuel cut-out or actuate alarms through circuits isolated by transformer-relay units. Device is useful on boilers working at 350-psi steam pressures, or 650 psi in tank service. • **Reliance Gauge Column Co.,** 5902 Carnegie Ave., Cleveland 3, Ohio.

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Stop Accidents! Protect Your Employees, Keep Production Moving . . . with

Alcoa Aluminum ABRASIVE TREAD PLATE!

Get lasting protection against slipping with Alcoa® Aluminum Abrasive Tread Plate . . . made with tough particles of fused aluminum oxide. Much lighter in weight, it's *much easier to install.* Corrosion resistant, it's *maintenance-free.* Long usage only renews the surface, uncovering embedded abrasive particles. Wherever the floor becomes wet, oily, greasy—wherever slippery materials accumulate—install Alcoa Aluminum Abrasive Tread Plate! (For sample and free booklet, check the coupon at bottom of this page.)

Your Guide to the Best in Aluminum Value ALCOA ALUMINUM CALL YOUR NEAREST ALCOA DISTRIBUTOR!

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Quick Delivery of Finer Welding Supplies Means a Better Welding Job . . . Faster!

Alcoa Aluminum WELDING MATERIALS

Lower final costs, improve finished quality by using Alcoa materials! Get answers, too—Alcoa offers you the benefit of extensive research in alloys, techniques, joining methods.

Here are some of Alcoa's welding materials:

- IG (Inert Gas) Welding Electrode
- Coiled Welding and Brazing Rod
- Straight-Length Welding and Brazing Rod
- Welding, Brazing and Soldering Flux
- Solder

For technical assistance, call your nearest Alcoa sales office. For quick delivery of materials, call your nearest distributor. (For welding films and recently released welding design information, check coupon below.)

Your Guide to the Best in Aluminum Value ALCOA ALUMINUM CALL YOUR ALCOA SALES OFFICE, OR NEAREST ALCOA DISTRIBUTOR!

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Offering the Broadest Distribution Organization in the Field . . .

ALCOA SALES OFFICES AND DISTRIBUTORS

Look in the Yellow Pages under "Aluminum"! There is an Alcoa sales office or an Alcoa distributor very near to you. Warehouses fully stocked with Alcoa® Aluminum products are strategically located everywhere. All the resources of Alcoa are yours, too: design help, research and development, production facilities, literature! Use this coupon for fast results . . . right now.

Aluminum Company of America
1840-R Alcoa Building, Pittsburgh 19, Pa.

Please send me the samples or information I have checked: Sample ☐ Free Booklet ☐ on Alcoa Aluminum Abrasive Tread Plate. Samples ☐ More Data ☐ on Alcoa Aluminum Industrial Fasteners. Free 16-Page Booklet ☐ on Alcoa Aluminum Fabricating Facilities. Information on Welding Films ☐ Latest Welding Design Information ☐ More Information on Alcoa Aluminum Alloy Bearing Stock ☐

NAME _____
TITLE _____
COMPANY _____
STREET ADDRESS _____
CITY _____ ZONE ____ STATE _____

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

FAST REPAIR, PATCHING FOR FLOORS...

- *Asphalt Mastic—Flooring Clay Emulsion Binder*
- *Latex Concrete Patch (small work)*
- *Latex Industrial Flooring (large work)*
- *Epoxy Flooring —for problem floors*

Keep factory and other work floors comfortable and accident free with these Flintkote Flooring Products—all are trowel finished.

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FLINTKOTE

Manufacturer of America's Broadest Line of Building Products

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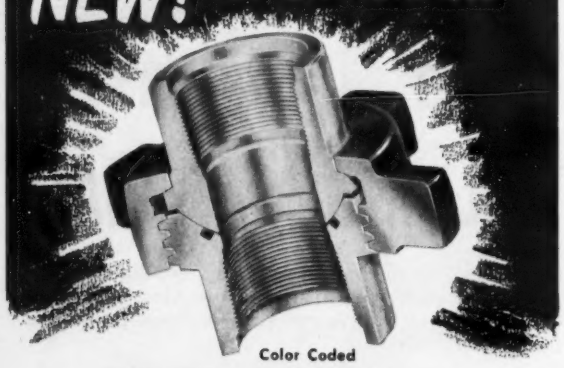
NEW! For Oil Field Use



Color Coded

CM *Hi-Pressure*

HANDLEBAR UNIONS

with 3-pitch standard Acme thread

Fast acting! Rapid make and break! Color coded for quick identification! Clayton Mark's new "Hi-Pressure" Handlebar Union offers dual seal of rubber-to-metal and metal-to-metal for high 6000 psi CWP rating. Also available with metal-to-metal seal for 4000 psi CWP rating.

CLAYTON MARK & CO.

1910 Dempster Street • Evanston, Ill.

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M&M AIR FLUFF PAPER SHREDDER

101

A valuable machine, to you, for the speedy, safe, efficient disposition of blueprints, letters, confidential records. The M & M Air Fluff Paper Shredder is also a money saver to those companies that use quantities of paper excelsior—by converting waste paper into valuable excelsior. Adjustable cuts of 1/8", 3/16", 1/4", or 3/8" widths. Models range in productive capacities from 200 to 2500 pounds per hour. Write for descriptive folder.

MITTS & MERRILL

1000 SO. WATER ST. • SAGINAW, MICHIGAN

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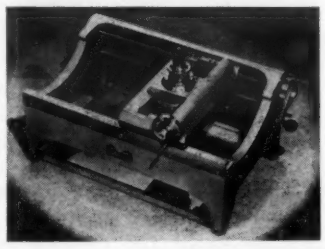
PORTABLE UTILITY HOUSE made of aluminum, set up in minutes

Permanent tool and equipment storage or portable field office are among the uses for the Mirro aluminum portable utility house. It folds flat to 7½ in. by

4 ft by 6½ ft for carrying in truck, station wagon, or trailer. Two persons can set it up in a few minutes without nuts, bolts, or screws. Price is $199. • **Mirro Aluminum Co.**, 1512 Washington St., Manitowoc, Wis.

▲ For more details circle NED-315 D on enclosed inquiry slip ▲

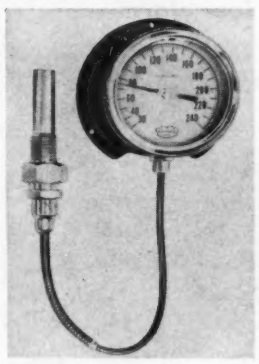
MEASURING MICROSCOPE for opaque and transparent objects



With minor adjustment, the Ealing two-dimensional measuring microscope can be placed directly on the object to be measured. It measures both opaque and transparent objects and scans a 20 x 10-cm area. The two scope objectives are 5 and 20 x. They permit reading directly to 0.01 mm and reading accuracy of ±0.01 mm. Working distance is 4 cm. • **Ealing Corp.**, 40 University Rd., Cambridge 38, Mass.

▲ For more details circle NED-316 D on enclosed inquiry slip ▲

DIAL THERMOMETERS for piping installations



Easily-read mercury-actuated dial thermometers feature a uniformly graduated scale, micrometer adjustable pointer, and an all stainless steel system. Designed for piping installations, they are furnished with brass separable socket and extension neck, and are available with fully compensated lines up to 200 ft long. Aluminum and other case materials are offered. Sockets are interchangeable for ½, ¾, or 1-in. NPT in standard 3½ and 6-in. extension neck types. Case design permits adjustable angle, rigid, or remote reading. Dial sizes of 4½, 6, and 8½ in. are offered in six ranges from −20 to 100° F to 100 to 400° F. Other ranges can be specified. • **Weksler Instruments Corp.**, 195 E. Merrick Rd., Freeport, L. I., N. Y.

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PAYS FOR ITSELF IN 90 DAYS!

SAVES MANY HOURS OF MAINTENANCE TIME—SAVES TRIPS—SPEEDS WORK

Only $249.00

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Finish Painted, Ready to Operate

TAKE THE WORKSHOP TO THE WORK!

SHOPMOBILE is an all-steel welded workshop on wheels with roomy storage compartments that can be locked and workbench surfaces at working height.

MECHANIZE YOUR MAINTENANCE DEPARTMENTS! WRITE TODAY FOR FULL INFORMATION.

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4750 W. 160th ST. • CLEVELAND 35, OHIO

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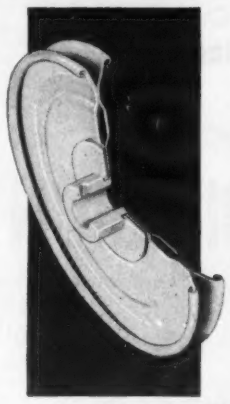

Specify Strong Smooth Safe SALEM

COPPER BRAZED

FORMED STEEL PULLEYS

for your power transmission

Engineered for Lawn Mowers, Garden Tractors, Compressors, Agricultural and Industrial Equipment. Smooth rolled edges reduce belt wear. Solid steel discs and hubs weather heavy loads and high speeds.

Write for Engineering booklet to help you specify your Pulley requirements.

SALEM STAMPING & MFG. CO., INC.

DEPT. 14 SALEM, OHIO

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EXTRA STRONG... BETTER LOOKING... LIGHTER WEIGHT!

Exclusive swaging and forming process prevents cross bars from turning, twisting, coming loose or falling out . . . provides greater strength and rigidity than gratings using obsolete methods of joining bars. Only Gary Galok Aluminum Gratings offer all these advantages:

High strength to weight ratio. Minimum deflection . . . easier to install.

Non-rusting and corrosion resistant. Ideal where chemical conditions prevail.

Can be used for decorative purposes, sun-shades, grilles, etc. Can be anodized in sunfast colors to blend with surroundings.

Available with serrated or plain bars—in all sizes to meet practically every requirement.

*Patent Pending

Write for Bulletin
Dept. D-10, E. Seventh Ave., Gary, Indiana

ROCKWELL-STANDARD CORPORATION

Grating Division, Gary, Indiana

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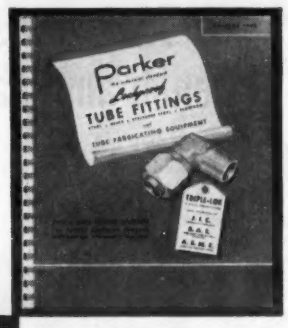

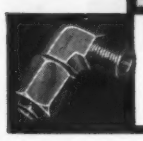

Pick the right tube fitting quicker with this 128-page Parker Data Book

All the data to design or "tube up" an industrial system is included in this 128-page Parker Tube Fittings Catalog. Guides you in proper tube selection. Gives installation hints, also descriptions and dimensions of all Parker Fittings: "Triple-lok," "Ferulok," "Intru-lok," "Weld-lok," "Braze-lok," in steel and stainless steel, copper, aluminum, brass, for any industrial system from instrument lines to high pressure hydraulic lines.

Ask your Parker distributor, listed in the Yellow Pages, for a Parker 4300 Catalog. Or write . . .

Parker FITTINGS AND HOSE DIVISION
17325 Euclid Avenue • Cleveland 12, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

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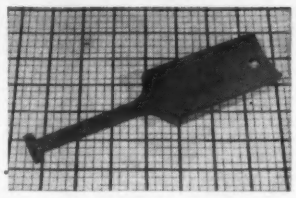
T-SLOT CLEANERS
in two sizes, help remove chips



Chips from planer or machine tool table slots are easily removed by this time and labor-saving T-slot cleaner available free of charge. Handle section is scoop shaped for picking up chips from the pocket end of the machine table. Sizes 1 and 2 have respective blade widths of 31/32 and 1¼ in. • **Dayton Rogers Mfg. Co.**, 2824 13th Ave. S., Minneapolis 7, Minn.

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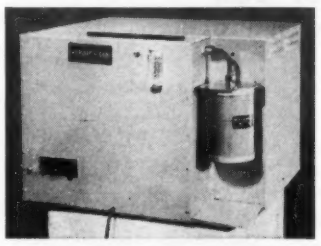
TRANSPORTABLE OXYGEN UNIT
produces unlimited supply from air



This AerOxy - Gen transportable oxygen unit draws air from the atmosphere, filters out contaminants, extracts oxygen, and delivers the gas at about 5 psi pressure in less than 1 min after activation. Unaffected by vibration or position, it can be used on a moving vehicle. Present model measures 2 ft square and weighs 150 lb. Units can be fabricated to almost any shape and size. Wide application is expected in industrial welding and cutting of metals. Unit operates on 110 v ac, although gasoline and battery powered models are available. • **Aerojet-General Corp.**, Chemical Div., 6352 N. Irwindale Ave., Azusa, Calif.

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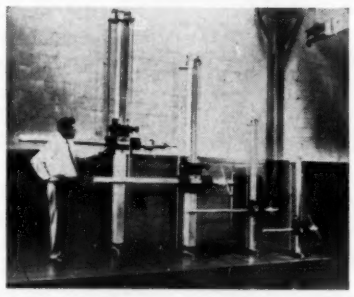
LAYOUT MACHINES
for 2, 4, 6, and 8-ft high castings



Addition of three sizes to present layout machine line now allows work to be done on 2, 4, 6, and 8-ft high castings. Horizontal reach is 18, 36, 48, and 48 in. respectively. Machines quickly layout vertical, horizontal, inside, or outside lines for final machining. Workpiece does not have to be clamped or moved in most cases. Upright column, cross arm, and linear attachment have vernier scales calibrated to 0.010 in. Vertical and horizontal distances from center lines are established by adding or subtracting from reference points. • **Portage Double Quick, Inc.**, 1043 Sweitzer Ave., Akron 11, Ohio.

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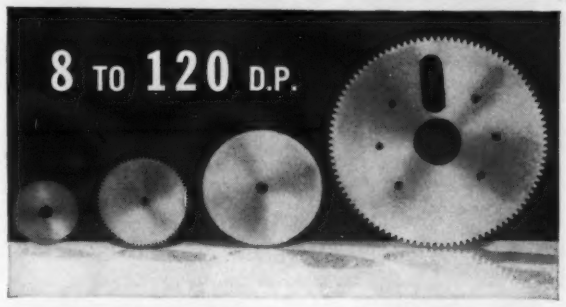

LONG LIST OF STOCK GEAR DIES OFFERS YOU BIG SAVINGS!

ACCURATE STAMPED GEARS by *WINZELER* are BIG savers of time and money. Single stampings are laminated to wide faces at savings up to 60%! Further economies are made possible by a BIG range of *stock* Dies. Modern new plant, methods, and equipment now greatly increase production speed, efficiency and *economy!* Send blue prints. Tell us about your needs today. No obligation.

SEND FOR...

New list of WINZELER-made stock Gear Dies. Ask for it on company letterhead, *please!*

WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.
7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

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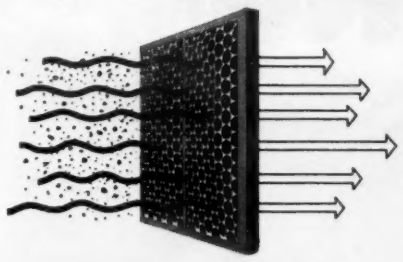
New AAF "throwaway" carbon filter traps odors and dirt...



...permits recirculation of freshened air

Now you can re-circulate *pure, clean air*—without the forbidding cost of most odor filters! Combines high odor removal and retention, high air-cleaning efficiency, low resistance to air flow. Average life, two months—then throw it away and put in another low-cost unit. No big initial investment, no maintenance, no reactivation. Shipped in vapor-proof container for long storage. Write for Bulletin 220. 391 Central Avenue, Louisville, Ky.

AAF American Air Filter
BETTER AIR IS OUR BUSINESS

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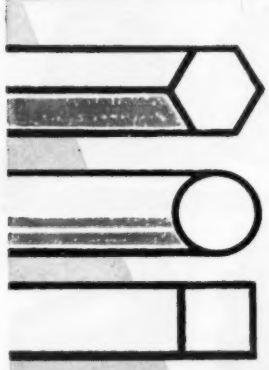
MUELLER BRASS CO.
S-C (super-cutting) ROD NEVER VARIES!



Perfectly uniform from batch to batch . . . its high quality never varies from order to order. Has excellent machinability for higher production at lower cost. If you use rod, you'll be money ahead using S-C . . . why not place your order today.

If you want more facts write for Engineering Manual FM-3010

251

MUELLER BRASS CO. PORT HURON 37, MICHIGAN

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SQUARE D
for a COMPLETE LINE of
INDUSTRIAL PRESSURE SWITCHES

Write for Bulletin 9012
Square D Company
4041 North Richards Street
Milwaukee 12, Wisconsin

SQUARE D COMPANY
wherever electricity is distributed and controlled

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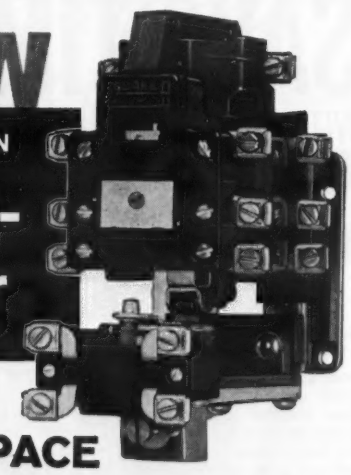
New COMBINATION Relay-Timer



SAVES PANEL SPACE

- Combines control relay and timing relay in one device
- Cuts installation and maintenance time
- Time delay after energization or de-energization —convertible in field
- Timing range 0.2 second to 1 minute
- 2 N.O. and 2 N.C. or 4 N.O. and 2 N.C. instantaneous contacts plus 1 N.O. and 1 N.C. timed contacts

Write for details. Square D Company
4041 North Richards Street, Milwaukee 12, Wisconsin

SQUARE D COMPANY
wherever electricity is distributed and controlled

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ONLY SQUARE D STARTERS WITH ONE-PIECE OVERLOAD RELAYS GIVE ABSOLUTE PROTECTION!

Write for the complete story on Square D Starters...

plus this simple 3-minute "JIG-SAW" demonstrator

Write Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

SQUARE D COMPANY
wherever electricity is distributed and controlled

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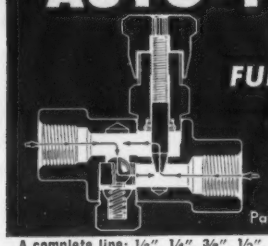
AUTO-PONENT®

HYDRAULIC FULL FLOW VALVES



Flow Control, Needle, Check, for HYDRAULIC Power

Model KF Flow Control Valve with Dial and Knob adjustment for direct reading and duplicating reference. Now available in Aluminum for 3000 psi.

Pat. #2,841, 174

A complete line: 1/8", 1/4", 3/8", 1/2", and 3/4" female Dryseal Pipe Sizes in all models and types. Equivalent Aeronautical Tube Sizes on special order.

MINIMUM PRESSURE DROP AND POWER LOSS . . . Oversize ports and passages give maximum flow at minimum pressure drop, insure greater accuracy and response in hydraulic or large volume air cylinder control.

EASY FLOW ADJUSTMENTS under full pressure. Seal located at port to eliminate air or dirt traps. Gland structure equally effective on pressure or vacuum.

SENSITIVE, CHATTERLESS BALL CHECK . . . Patented design insures rapid ball movement to open or close at low differentials.

FORGED BODIES permit higher pressures with wide safety margins. Aluminum—3000 psi; Steel and Stainless Steel—5,000 psi. Pressure ratings based on better than 5 to 1 safety factor. All internal parts are Stainless. Write for illustrated catalog.

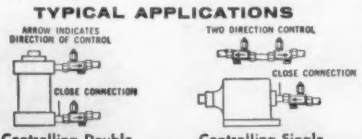
Model F Standard Flow Control Valve or Model H Needle Valve

Model KF Knob and Dial Flow Control Valve or Model KH Needle Valve.

Model PF Knob and Dial Flow Control Valve or Model PH Needle Valve for panel mounting.

Model C Check Valve for In-Line Mounting.

TYPICAL APPLICATIONS



Controlling Double Acting Cylinder — Controlling Single Acting Cylinder

AUTOMATION AUTO-PONENTS INC. COMPONENTS ® 2929 GRANT STREET BELLWOOD (Chicago Suburb) ILLINOIS

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This DESIGN GUIDE tells you how and where to use grating and treads

- New Specifications
- New Installation Methods
- New Applications

24 page, information-packed Data Book on grating of carbon steel, aluminum, and alloy metals for special situations.

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BLAW-KNOX
GRATING

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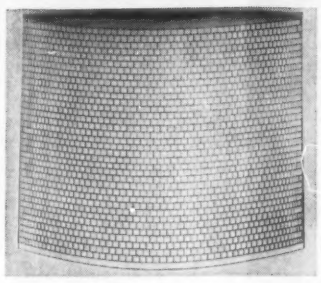
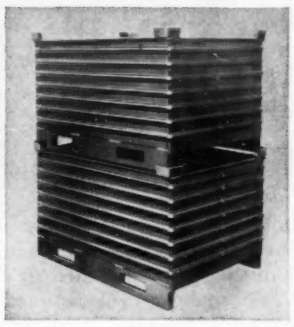
INSULATED TANK remains operational at −35° F



Heat loss is extremely low for this Eskamo insulated tank designed for outside storage of pulps, chemicals, and clays. Constructed of reinforced concrete, tank has acid and alkaliproof ceramic surfaces inside and out. All insulation is placed between the walls. Tank is usable at all times, even with temperatures of −35° F or lower. • **Service & Erection Co.**, 1673 Washington Rd., Pittsburgh 28, Pa.

▲ For more details circle NED-333 D on enclosed inquiry slip ▲

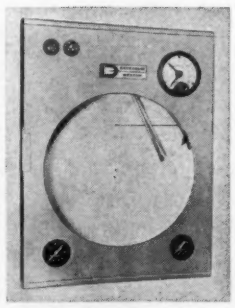
CORRUGATED SHOP BOX for parts, scrap, or forgings



Square corners of this standard size corrugated steel box provides rigidity in stacking, plus maximum utilization of interior space. The 33 x 48 x 24-in. welded steel box has stacking pockets for tiering to any height. Loaded with parts, scrap, forgings, castings, or bulk materials, it has four-way entry for fork track handling and slots for rotary dumping. • **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

▲ For more details circle NED-334 D on enclosed inquiry slip ▲

ELAPSED TIME CONTROLLER for use in batch type operations



Timed automatic regulation of either temperature or pressure is provided by Model 7003 elapsed time controller, designed for use in batch type operations. Types for Bourdon temperature and pressure instruments are available with ranges from −100 to 1000° F and from 30 in. of mercury vacuum to 7500 psi. The control signal is pneumatic. Red signal light indicates the start of the process by an external start button. When the preset timed period has elapsed, the controller automatically shuts down, and the timer resets. The 1, 5, 12, or 24-hr ranges have a minimum setting equal to 4 per cent of the range. A 12-in. circular chart records all data with one or two pens. • **Daystrom, Inc.**, Weston Instruments Div., 614 Frelinghuysen Ave., Newark 12, N. J.

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SAVE TIME
WITH KAMLOK QUICK COUPLERS

CUT YOUR MAINTENANCE COSTS

Save production time by replacing hose and pipe connections with Kamlok Quick Couplers. Used wherever hose and pipe connections are periodically uncoupled. Fast . . . Safe . . .Sure. No tools needed. Just fit together and pull the cam arms down. Lock securely in place. Leakproof gasket cannot fall out.

KAMLOKS are available from stock in bronze, aluminum, stainless steel, monel and semi-steel from 1/2" through 6" sizes. 39 different styles to choose from. Specials to fit your needs. All Kamloks 100% master gauged for complete interchangeability. Get full details.

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KAM-2

OPW-JORDAN 6013 WIEHE ROAD CINCINNATI 13, OHIO

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New Stanley-Yankee Vises cut costs at bench and machine

New No. 4993A Swivel-Tilt Vise combines swivel base and angle base for quick compound angle set-ups. The exclusive dovetail slot in the vise permits adjustment the full length while retaining the swivel feature. Vise can be detached from swivel-tilt base quickly and easily.

New No. 993A Utility Vise with 3" Jaws—precision-built for machine shop use.

Vises and bases are available separately. Ask your industrial supply distributor for details, or write Stanley Tools, 5804 Elm St., New Britain, Connecticut.

STANLEY ® The Tool Box of the World

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Difficult-to-mark parts?

1. Rounds or Hexes Solids or Tubes
2. Aluminum Channels, other Shapes
3. Close-Tolerance Marking
4. Parts with no true radius
5. Conical Pieces
6. Long Bars or Tubes

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One of the first to embark upon a research and development program for Viton O-rings, Parker Seal Company now makes another significant advance in this versatile high temperature material by offering Viton O-rings in all A.N. or A.R.P. standard sizes. This means faster delivery and greater economy for all these popular O-ring sizes. It's another plus result of **responsible leadership** *in O-ring engineering by Parker.*

Parker SEAL COMPANY
Culver City, California and Cleveland, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

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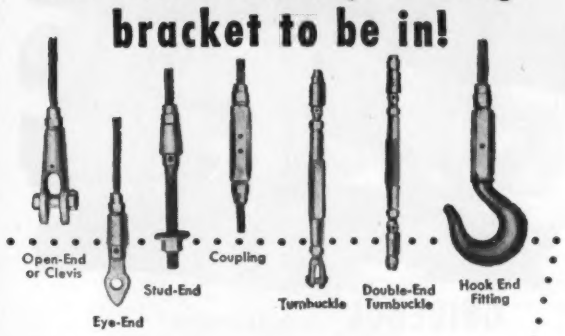
An ideal money-saving bracket to be in!



- Electroline Wire Rope Fittings offer these important advantages:
- Installation time: only a few minutes . . . and by ordinary labor working with ordinary tools.
- Longer life for wire-rope by damping vibration stresses and overcoming rope fatigue at the entrance of the fitting . . . where rope-weakening often occurs.
- Cut re-roping costs . . . use these fittings over and over again.
- Electroline Wire Rope Fittings are safe, economical, permanent. Obviously, they're a good investment.

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Electroline PRODUCTS
THE SUPERIOR SWITCHBOARD & DEVICES COMPANY
Box 590, Canton 1, Ohio

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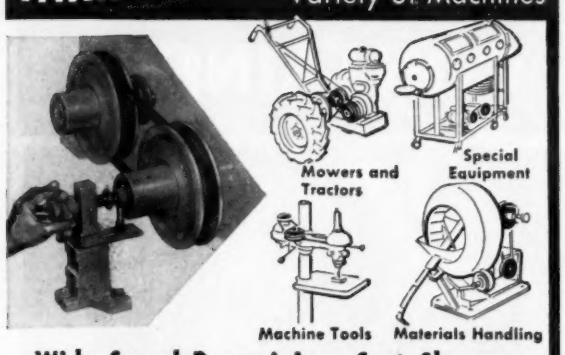
SPEED SELECTOR
VARIABLE PITCH SHEAVES
Control Speeds on Variety of Machines



Wide Speed Range! Low Cost Sheaves

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SPEED SELECTOR INC.
P.O. BOX 312-N • CHAGRIN FALLS, OHIO

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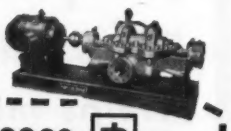
for the toughest pumping jobs choose general purpose pumps



RUGGED, HEAVY DUTY pumps ideally suited for paper mills, power plants, water plants, mines, general manufacturing or process work. Ingersoll-Rand Single-Stage and Two-Stage pumps have simplified horizontally split casings for complete accessibility of all internal parts without disturbing suction and discharge piping.

Sizes range to 400 hp with deliveries to 4000 gpm . . . heads to 1100 ft.

For performance and specification data write today for latest catalogs or see your local I-R representative or distributor.

92A-9

1860 - 1960
A CENTURY OF PUMP PROGRESS from the leading Manufacturer
Ingersoll-Rand
11 Broadway, New York 4, N. Y.

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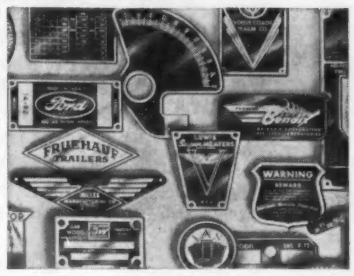
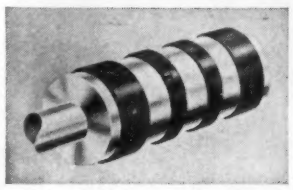
NAMEPLATES
in any size, shape, metal, color



Nameplates ranging from heavy gage metal types attached with rivets or screws to self-adhesive foils and decals are available in any size, shape, metal or color. They are made to customer specification in small or volume lots and can be chemically etched, lithographed, silk screened, or anodized. Nameplates are coated with a scratch and weather resistant protective finish. • **Ward's Name Plates**, 8502 Lyndon Ave., Detroit 38, Mich.

▲ For more details circle NED-343 D on enclosed inquiry slip ▲

TEFLON PISTON RINGS
suited for nonlubricated service



Carbon-filled Teflon used in these piston rings for nonlubricated service exhibits a low coefficient of friction, has high thermal stability, and is suited for continuous service in a −420 to 500° F range. Also abrasion resistant, rings imbed hard foreign particles without adversely affecting cylinder or ring life. Uses include sealing of reciprocating, oscillating, and rotating motion of both external and internal cylindrical surfaces against liquid and gas leakage. Designs include butt joint, step joint, scarf cut, or solid. • **Garlock Packing Co.**, 444 Main St., Palmyra, N. Y.

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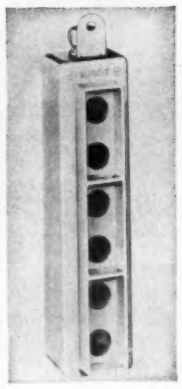
PUSHBUTTON ENCLOSURES
pendant type made of soft rubber



The 4000 Series of soft rubber, pendant-type pushbutton enclosures in safety yellow color is impervious to moisture, oil, grease, and most chemicals. Enclosures are suitable for operations where workman has to move around his work with power control in hand. Nine models accommodate all standard oil-tight pushbutton units, indicator lights, and selector switches. Each has a sealing grip, suspension bracket, and internal grounding strip. A wobble operator is optional. • **Daniel Woodhead Co.**, 15 N. Jefferson St., Chicago 6, Ill.

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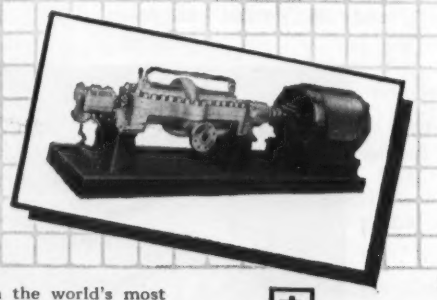
You specify the PRESSURE and Ingersoll-Rand will specify the PUMP



10-972

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PUMPS • COMPRESSORS • DIESEL ENGINES • AIR & ELECTRIC TOOLS
TURBO BLOWERS • CONDENSERS

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Cross makes a complete line of beautiful, functional perforated metal that will help give your product a look of luxury. For complete information write to . . .

NS NATIONAL STANDARD COMPANY
Cross Perforated Metals
NATIONAL-STANDARD COMPANY
Carbondale, Pa.

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BEVERLY THROATLESS SHEARS

MAKE CUTS LIKE THESE
QUICKLY... EASILY... ACCURATELY

18 ga. metal cut with Model B-1 Shear.

Save time, labor and material—use a Beverly to make any cut . . . straight, curved or irregular in any metal. Exclusive design allows work to be turned at any angle while cutting. Standard in the industry for years. 4 models—capacities to 3/16" mild.

See your Beverly Distributor for a demonstration. Write for FREE illustrated circular on Beverly metal cutting Shears.

MODEL B-3 with ball bearing hold down. Cap. 3/16" mild; 10 gauge stainless.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

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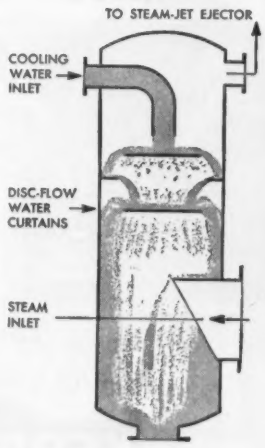
How to CONDENSE STEAM and PULL A VACUUM at LOW COST

I-R Disc-Flow Barometric Condensers provide a simple and low-cost method for condensing steam and creating a vacuum wherever condensate is expendable. Their high efficiency, simplicity of operation and overall economy make them ideal for use with steam engines, turbines, vacuum pans and a wide range of high-vacuum processes.

Since there are no water nozzles or small openings, they can be used where cooling water contains debris. For operation at partial loads, water flow can be reduced to as low as 1/3 of full capacity. Steam-jet ejectors or vacuum pumps can be supplied in ample size for all air-removal requirements.

Ejector-type units are also available.



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Ingersoll-Rand
4-779 11 Broadway, New York 4, N. Y.

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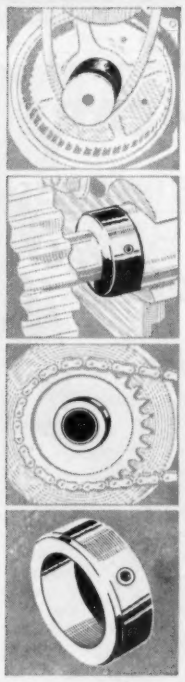

HALLOWELL steel collars

—practical answer to dozens of fastening problems

If your product incorporates shafts or spindles, HALLOWELL steel collars can help you simplify design and purchasing. For example, you can utilize these versatile fasteners as thrust collars, locking collars, spacers, cam operators, valve stem adjusting collars, indexing devices, hubs for plate sprockets, etc. And you can get immediate delivery (sizes 1/16 through 3 inch bore) from local dealer stocks. Collars feature famous UNBRAKO knurled cup point set screws for positive locking action. See your SPS distributor or write direct for new folder 2554 offering latest application ideas.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

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IF YOU USE VALVES

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Kerotest has been producing highest quality valves for the past 50 years. Our new catalog gives dimensions, specifications and working tables to help you specify the right valves for your applications.

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KEROTEST

KEROTEST MANUFACTURING COMPANY
2522 Liberty Avenue, Pittsburgh 22, Pa.

In Canada, Kerotest products are manufactured and distributed exclusively by Guelph Engineering Company, Guelph, Ontario.

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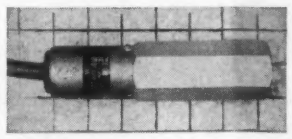
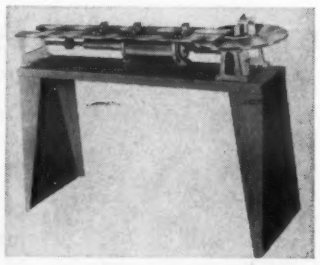
PRESSURE SWITCHES operate at from 25 to 1000 psi



Miniature, piston - type Model 760-A and 76-B pressure switches operate at adjustable pressures from 25 to 250 and 200 to 1000 psi, respectively. Proof pressure is up to 5000 psi. With only one moving part, the 2-oz unit operates in any position as a high or low limit switch, or as a signal switch. Contacts are rated 5 amp at 240 v ac, single-pole, double-throw. • **Alloy Bellows, Inc.**, 18125 Roseland Rd., Cleveland 12, Ohio.

▲ For more details circle NED-353 D on enclosed inquiry slip ▲

METAL BENDING MACHINE handles up to 1/2-in. steel rod



Powered with 100-psi air, Model B-10 precision metal bending machine bends 1/2-in. steel rod up to 135 degrees in less than a second. Square, round, vee, or other shapes are handled, and setup is fast and easy. Features include adjustable gages, simple tooling, automatic lubrication, and foot valve control. • **Vemaline Products Co.**, W. V. Industries Div., Box 222, Hawthorne, N. J.

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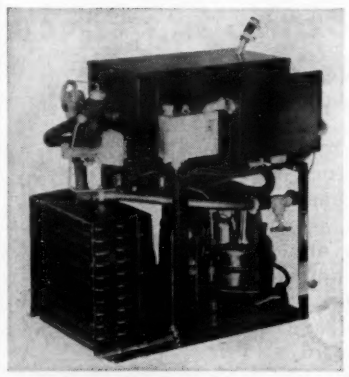
LIQUID CHILLER maintains bath from —30 to 75° F



Ready to plug into electric outlet, this packaged, force-flow liquid chiller will refrigerate, circulate, and closely control the temperature of water, liquid chemicals, acids, or other corrosive or noncorrosive liquids. It is applicable in lab, photographic, parts testing, tool quenching, or product cooling operations and is available in 1/4, 1/3, and 1/2-hp sizes. With air or water-cooled condensers, these sizes will maintain bath temperatures in range from −30 to 75° F with ±2, ±1/2, and ±1/10° F accuracy. Models with 15 to 75° F range have Nytel nylon pump with stainless steel shaft and fittings. Metal cabinet is available. • **Remcor Products Co.**, 321 E. Grand Ave., Chicago 11, Ill.

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new, unique, "MCS" drive offers amazing advantages

Wood's new "MCS" motion control, variable speed drive holds constant driven speeds under varying torque loads. It won't freeze or stick. Practically no maintenance is required. No more downtime, running through the speed range or dismantling. The oil reservoir requires checking only once or twice a year. Look into these and many other amazing features of Wood's new "MCS" and "MS" variable speed drives.

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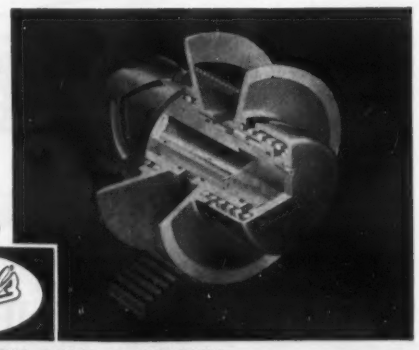

MCS/960

Woods

T. B. WOOD'S SONS COMPANY, CHAMBERSBURG, PA.
ATLANTA • CAMBRIDGE • CHICAGO • CLEVELAND • DALLAS

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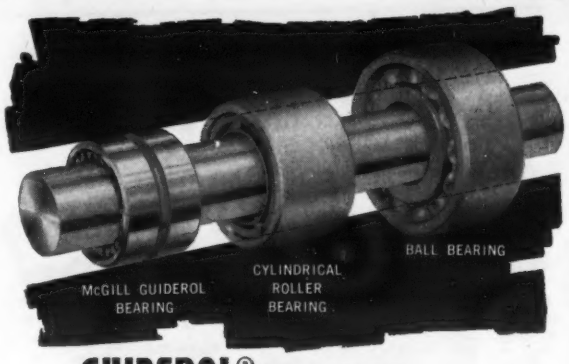

GUIDEROL® bearings save radial space and still offer greater capacity

The photo above shows three bearings mounted on a common 1" shaft. The GUIDEROL bearing shown actually has up to 23% greater load capacity than the other two bearings and saves 3/8" to 1/2" in housing space. A full complement of center guided rollers provides maximum effective capacity and prevents binding under adverse conditions in either horizontal or vertical mountings. Available in shaft sizes from 5/8" to 9 1/4"; capacities from 2880 lbs. to 128,670 lbs. (at 100 RPM).

Write for helpful Bearing Handbook No. H-54-C

engineered electrical products
McGILL®
precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, IND.

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- Also made of new high density polyethylene—Poly-Opal*. Are chemically inert, stain resistant and have lower permeability to moisture and gases than conventional polyethylene.

*T. M.

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PIONEERS AND SPECIALISTS IN PLASTIC CONTAINERS SINCE 1919

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Only B&P MAGNESIUM DOCKBOARDS have all these advantages

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AMERICA'S LARGEST MANUFACTURER OF MAGNESIUM ASSEMBLIES

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THIS EXPANDING BACK-UP WHEEL FOR COATED ABRASIVES LETS YOU...

CUT GRINDING/ FINISHING/ POLISHING/ COSTS 3 WAYS!

Sizes: 1" to 5" diameter—others on special order.

Flexcore expanding wheels provide triple savings by:

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2. Eliminating wheel replacement costs—Permanent metal core is never scrapped . . . low-cost rubber flexers are easy to replace.

3. Speeding production—Flexcore puts all your abrasive to work for you . . . more output per time and money invested . . . no time-consuming maintenance.

Use *Flexcore* on portable tools or bench-stands for all abrasive operations from heavy stock removal to smooth finishing.

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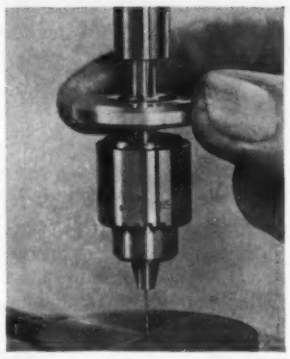
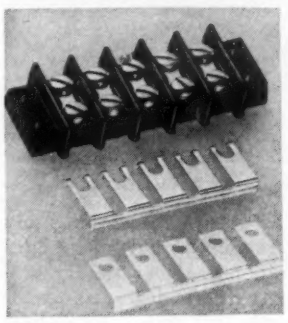
DRILL ADAPTER for small hole drilling



Small drill breakage is eliminated by the Stanley sensitive precision drill adapter. Finger tip pressure controls the drill pressure. Adapter equipped with a 5/32-in. Jacobs chuck sells for $27.50. Model with Albrecht chuck sells for $34.95. • **Frank Loy & Associates**, 2890 W. Valley Blvd., Alhambra, Calif.

▲ For more details circle NED-362 D on enclosed inquiry slip ▲

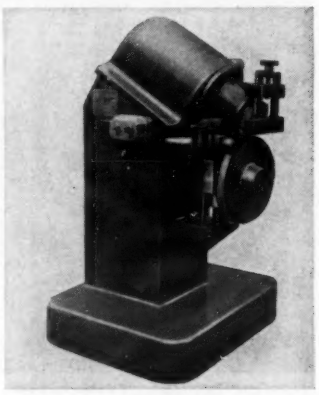
WIRING JUMPER STRIPS are single piece brass units



Ready-to-use nickel or cadmium-plated brass jumper strips eliminate the need for usual series of jumpers between terminal stations on multiple adjacent station connections. Type RJ closed and RJS open jumper strips are designed for use on standard Kulka Series 601 terminal boards, or Navy Types 6TB or 7TB. RJ units accept 6-32 screws. Both are available with up to 23 lugs. Channeled edge lends mechanical rigidity. • **Kulka Electric Corp.**, 633-643 S. Fulton Ave., Mt. Vernon, N. Y.

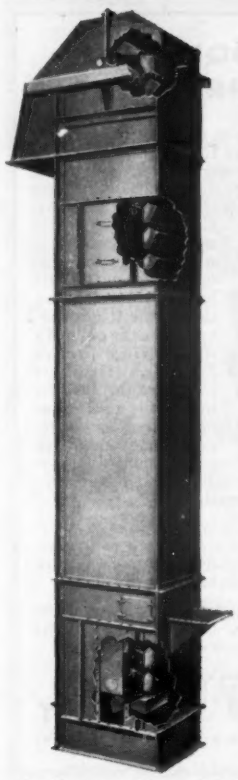
▲ For more details circle NED-363 D on enclosed inquiry slip ▲

PLATE BEVELLER cuts ½-in. bevel on mild steel plate



Three sizes of the compact Model X-8 plate beveller cut 30, 37½, or 45-degree bevels. They cut a ½-in. bevel on mild steel plate or ⅜-in. stainless steel plate, preparing a seam for a perfect arc weld fillet. On plate up to 1 in. thick, both sides can be bevelled by turning the plate. Although designed for cutting bevels on small hand-carried pieces, larger pieces can be cut by using a support table. Cutting speed is 11 fpm with mild steel. • **American Pullmax Co.**, 2455 N. Sheffield Ave., Chicago 14, Ill.

▲ For more details circle NED-364 D on enclosed inquiry slip ▲



Cement Mill Elevators...

15 to 470 tons per hour

Removable split hood for easy access to head section.

Sealed heavy-duty antifriction bearings entirely outside of casing with dust seals around the head shaft.

Dust-tight and weather-proof 10-gauge steel casing with reinforced corners. Ample clearance between buckets and casing.

Increased capacity by closer bucket spacing. Lips and sides of buckets reinforced.

Equipped with heavy-duty steel knuckle chain assuring long life.

Large access doors for easy inspection and maintenance.

Cleanout doors at front and rear of casing.

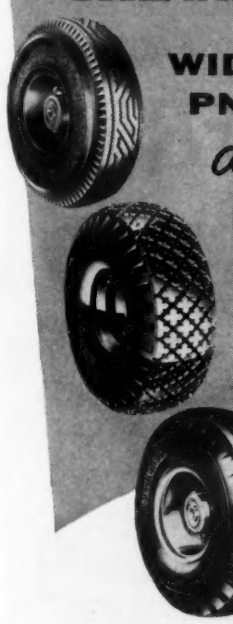
Send now for Bulletin 950, or place a call for engineering assistance to The Jeffrey Manufacturing Company, 952 North Fourth St., Columbus 16, Ohio.

JEFFREY

▲ For more details circle NED-365 D on enclosed inquiry slip ▲

GENERAL

WIDE-BASE PNEUMATICS *designed* FOR YOUR PRODUCT



THE GENERAL TIRE

Whatever your need, there's a General Wide-Base Pneumatic to get the job done faster, easier and more economically. With high flotation for easier rolling, Generals cushion loads and equipment, save costly floors and floor surfaces, increase load capacity. Get the right tire for your product from the full line of General Wide-Base Pneumatics.

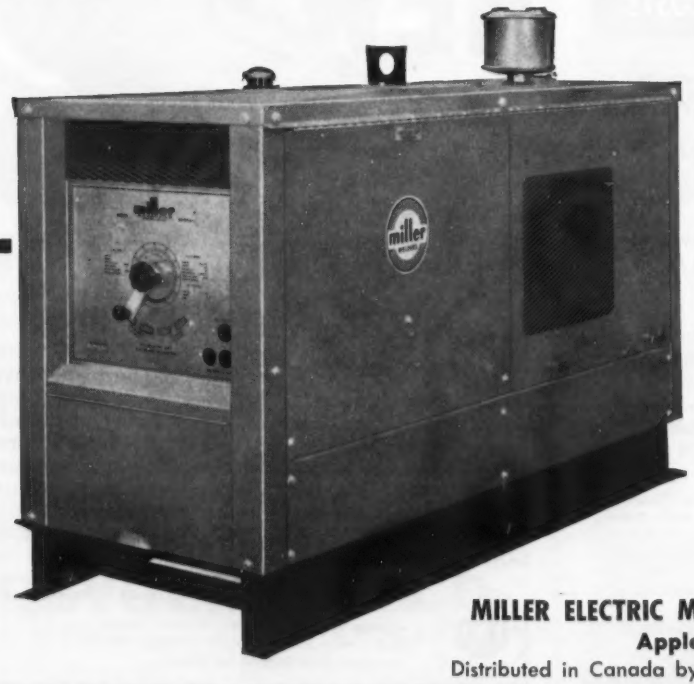
Available separately or in assemblies of tires, tubes and wheels. Sizes O.D.8" to 35"—200 to 7890 lbs. capacity for low or high speeds.

Send for Catalog, Dept. 4

THE GENERAL TIRE & RUBBER CO.
AKRON, OHIO

▲ For more details circle NED-366 D on enclosed inquiry slip ▲

miller *Welder/Power Plant Reliability now available with Diesel Economy and Safety*



Hercules 38 h.p. 3 cylinder direct injection diesel engine drives new Miller DD-250-L d-c welder/a-c power plant, which *delivers:*

Two d-c welding ranges: 50-200 amperes, 150-350 amperes

Duty Cycle: 100%

Rated output: 250 amperes d-c at 40v, 100% duty cycle

Maximum open circuit voltage: 65

Current adjustment steps: infinite

Power: 12 KW, 115/230v single phase, 60 cycle a-c.

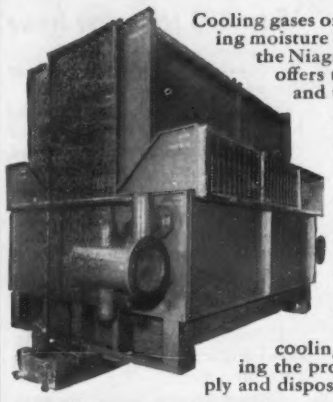
Up to 6.5 KW a-c while welding. 1 KW, 115v auxiliary d-c power while welding.

Complete details and engine specifications will be sent promptly upon request.

MILLER ELECTRIC MANUFACTURING COMPANY, INC.
Appleton • Wisconsin
Distributed in Canada by Canadian Liquid Air Co., Ltd., Montreal

▲ For more details circle NED-361 D on enclosed inquiry slip ▲

ECONOMICAL COOLING OF GASES AND COMPRESSED AIR



Cooling gases or cooling and removing moisture from compressed air, the Niagara *Aero* After Cooler offers the most economical and trustworthy method. Cooling by evaporation in a closed system, it brings the gas or compressed air to a point close to the ambient temperature, effectively preventing further condensation of moisture in the air lines. It is a self-contained system, independent of any large cooling water supply, solving the problems of water supply and disposal.

Cooling-water savings and power-cost savings in operation return your equipment costs in less than two years. New sectional design reduces the first cost, saves you much money in freight, installation labor and upkeep.

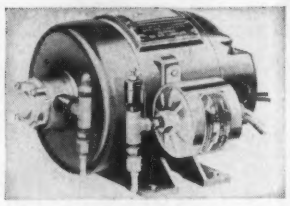
Niagara *Aero* After Cooler systems have proven most successful in large plant power and process installations and in air and gas liquefaction applications.

Write for Descriptive Bulletin 130.

NIAGARA BLOWER COMPANY
Dept. ED-4 405 Lexington Ave., NEW YORK 17, N. Y.
District Engineers in Principal Cities of U. S. and Canada

▲ For more details circle NED-367 D on enclosed inquiry slip ▲

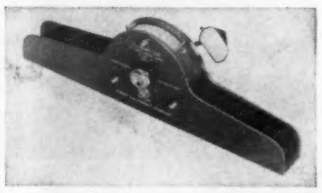
AIR PUMP
rated 0.3 cfm at 20 psi



This 37-lb Model RG-10470 oil-free air pump for industrial processes or machines delivers 0.3 cfm of free air at 20 psi. The 115-v ac motor develops 1/6 hp at 3450 rpm. Pressure switch cuts off pump under increasing pressure conditions at 20 psi. Restart is automatic under decreasing pressure conditions at 18 psi. Prelubricated bearings, self-lubricating thrust plates and blades, and oil-free impeller parts are among features. • **Lear, Inc.**, Box 688, Grand Rapids 2, Mich.

▲ For more details circle NED-369 D on enclosed inquiry slip ▲

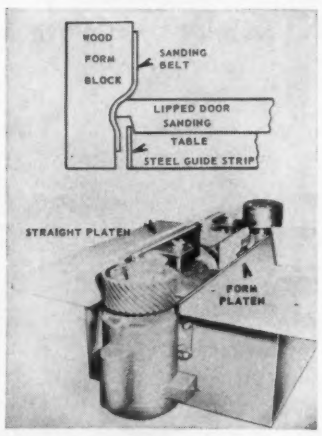
VERNIER ANGLE GAGE
now has adjustable zero position



Improved Clinometer vernier angle gage Model A is now available with an adjustable zero position, an improved shell molded case, and a rust protected 12-in. base. The light, portable instrument is used to determine any angle of inclination from true horizontal and is unaffected by shocks or vibration. Using the gravity system, unit measures in a 0 to 360-degree range, is self-checking, and reads directly to 1 min. Tests show gage repeats to 7½ sec of arc. • **Engis Equipment Co.**, 431 S. Dearborn St., Chicago 5, Ill.

▲ For more details circle NED-370 D on enclosed inquiry slip ▲

BELT TYPE EDGE SANDER
also performs profile sanding

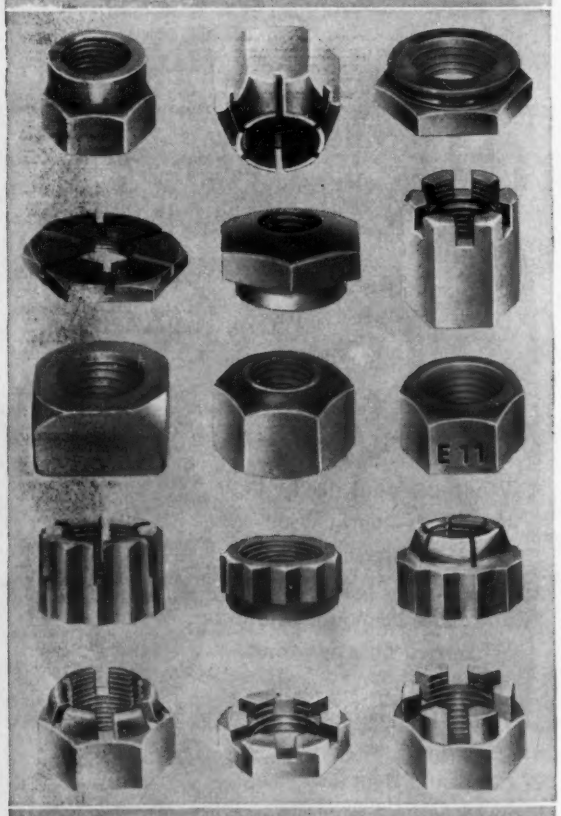


Two platens and tables of the Acme belt-type edge sander facilitate profile and square edge sanding of wood, metals, and plastics. One table fronts on a conventional 20-in. long, square - edge sanding platen, and the other on a wood block contoured to shape the belt to the desired profile. Standard units have 2¼ x 80 in. aluminum-oxide or silicon-carbide abrasives belts. Four-inch wide belts and platens are optional. Either ½ or ¾-hp totally-enclosed direct motor drives can be furnished. • **R. A. Ness & Co.**, 5083 Elston Ave., Chicago 30, Ill.

▲ For more details circle NED-371 D on enclosed inquiry slip ▲

SPECIAL NUTS
to specs. 3/8" - 4-1/4" cross flats

special machines + large stock of material × years of experience = speedy deliveries high quality low prices



Here are a few samples made to customers specifications . . Our batteries of special high-speed multi-spindle, automatic machines make possible fast and accurate production of hexagon nuts of non-standard height and special shape from carbon or alloy steel, Naval bronze or other non-ferrous metals; also AN 310 through AN 335 as per latest Airforce specifications. Very often the special nut you require may be similar to one we are already making and a simple modification would result in a price advantage and quicker deliveries to you . . Send us your blueprint and particulars —let us quote on your requirements . . We also have a catalog that contains complete specifications, engineering data and prices regarding our standard nuts.

*Manufacturer of Standard and Special *12 Pointer, Square and Hexagon Nuts . . . "Huglock" and "Conelok" locknuts.*

NATIONAL MACHINE PRODUCTS COMPANY
an SPS company 44250 UTICA ROAD UTICA, MICH

▲ For more details circle NED-368 D on enclosed inquiry slip ▲

NOW! IMPROVE PRODUCTION — LOWER MAINTENANCE COSTS
with

K-LENS-M
REG. U.S. & CAN. PAT. OFF.

BETTER VISION PRODUCTS

The Modern Liquid Method that Cleans Glass or Plastic at Lower Cost per Cleaning.

The K-Lens-M Goggle Cleaning Station cuts down maintenance time for refilling; holds 1400 K-Lens-M lens tissues; dispensing one sheet at a time; holds full 16 oz. bottle of K-Lens-M lens cleaner.

FREE SAMPLE — Request 30-Day Trial Offer

The **WILKINS Co.**, Inc.
Cortland 32, N. Y.

Wise to Choose — Safe to Use
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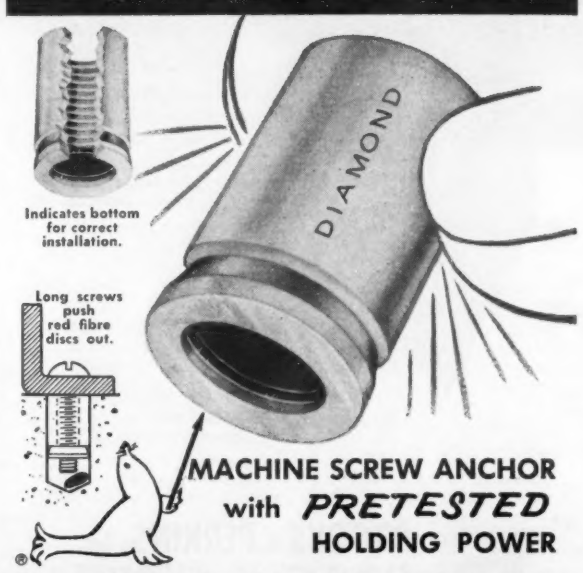
▲ For more details circle NED-372 D on enclosed inquiry slip ▲

NEW... Red Seal® DISC KEEPS DIRT OUT of THREADS



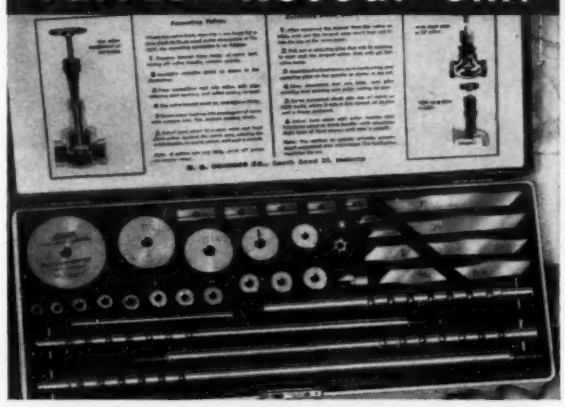
MACHINE SCREW ANCHOR with *PRETESTED* HOLDING POWER

Now available in 10-24 and ¼"-20 sizes. Samples on request.

DIAMOND EXPANSION BOLT CO., INC.
Garwood, New Jersey

▲ For more details circle NED-373 D on enclosed inquiry slip ▲

Don't junk leaky valves – Reseat 'em!



Pays for itself on the first 2 jobs!

Reseats flat and tapered seat globe or angle valves—all bibbs, faucets—quickly and accurately. The saving, over tearing out and renewing leaky valves and fixtures, is tremendous.

Cutters operating under screw feed, leave worn, scored seats glass smooth, level, absolutely tight. The cutter rotates on a level plane and is advanced by slight turns of the feed screw until the job is done.

A guide pilot centers each cutter; a tapered cone centers each spindle. Perfect alignment is inevitable. Cutters guaranteed. Write for literature!

2" for ¼" to 2" valves and ¼" to ¾" bibbs . . $59.85
3" for ¼" to 3" valves and ¼" to ¾" bibbs . . $79.50

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

▲ For more details circle NED-374 D on enclosed inquiry slip ▲

NEW

impact wrenches hit harder... last longer

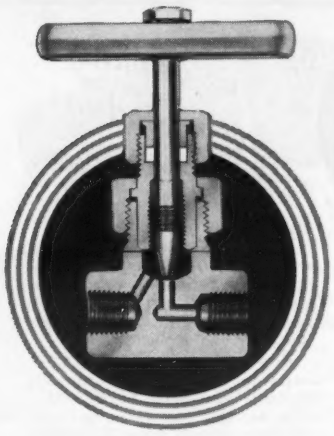
Two new, lightweight, easy-to-use Gardner-Denver impact wrenches hit harder, yet don't wear themselves out. They're the result of intensive engineering to develop a powerful, long-lasting impact mechanism. The combination of a fast-accelerating air motor and a new, patented clutch mechanism assures positive starts, efficient impacting and lowest maintenance. Model 18B-9, 1¼" capacity—Bulletin 18-15. Model 18B-7, ¾" capacity—Bulletin 18-11.

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Ave., Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-375 D on enclosed inquiry slip ▲



SOLVE YOUR METER MANIFOLD AND CORROSIVE FIELD SERVICE PROBLEMS

AMERICAN® NEEDLE VALVES

Teflon-packed forged steel American Needle Valves eliminate gland leaks, deliver dependable service under the toughest conditions. Stainless or carbon steel precision machined valve bodies are ideally suited for welding. Stainless steel centerless-ground valve stem design makes it simple to repack valves under pressure.

Standard valves design rated for pressures to 5,000 psi at 70°F. Upon request, assembled valves are hydrostatically tested to 10,000 psi (twice rated working pressure) and are individually inspected. Valves also furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

Angle or straight patterns—screwed or union bonnets.

Your American Meter representative will give you full details.

AMERICAN® METER COMPANY
(INCORPORATED ESTABLISHED 1836)
General Offices: Philadelphia 16, Pa.
Sales Offices in Principal Cities

▲ For more details circle NED-376 D on enclosed inquiry slip ▲

GO-GETTER CUTS COSTS IN HALF: MAKES JOBS SAFER

A leading chemical plant faced with the double explosion hazard of ethylbenzene fumes and aluminum chloride dust, solved its material handling problems—and saved money in the process—through the use of Revolvator's new fork lift trucks labeled Type Ex by Underwriters' Laboratories for Class 1 Group D explosion hazardous areas.

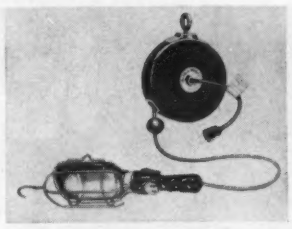
Previously, two men with a hand truck were required for this operation. Since the introduction of the Explosion Proof Go-Getter, one operator easily charges the hoppers in a safe manner with a minimum effort. "What used to be a dangerous, disagreeable job has now become a simple task," says the plant manager.

The explosion proof Go-Getter, available in 12 standard models, is but the latest development in Revolvator's better than a half century of experience in materials handling equipment covering standard walkie lift trucks, hand lift trucks, portable elevators and related equipment.

REVOLVATOR CO.
8732 TONNELE AVENUE, NORTH BERGEN, N. J.
SINCE 1904

▲ For more details circle NED-377 D on enclosed inquiry slip ▲

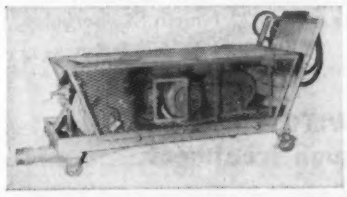
CORD REEL LIGHTS
20, 30, and 40-ft cord lengths



Line of UL - approved cord reel lights is offered for easy wall or overhead mounting. Two or three-conductor, neoprene-jacketed wire is grease, oil, moisture, and dirt resistant. Cord lengths are 20, 30, or 40 ft. The cord is easily retracted into the reel, even when pulled out to its full length. • **Belden Mfg. Co.**, 4647 W. Van Buren St., Chicago 80, Ill.

▲ For more details circle NED-378 D on enclosed inquiry slip ▲

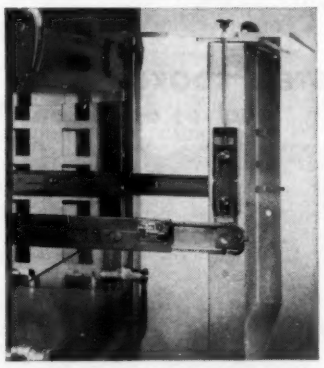
PORTABLE CONVEYOR
for light, free-flowing materials



Up to 8 tons of free-flowing materials weighing 25-35 lb per cu ft can be moved in 1 hr by the Pneu - Flo 10 portable conveyor. The low velocity, positive pressure system is designed for a conveying distance of about 40 ft. It is well suited for picking up from a mixer or blender, bin outlet, or any device where material will flow into the feeder. Crank-operated variable speed sheave is used to adjust conveying rate. Unit rolls on 5-in. casters and has clearance height of 2 ft 6 in. • **Sprout, Waldron & Co.**, 130 Logan St., Muncy, Pa.

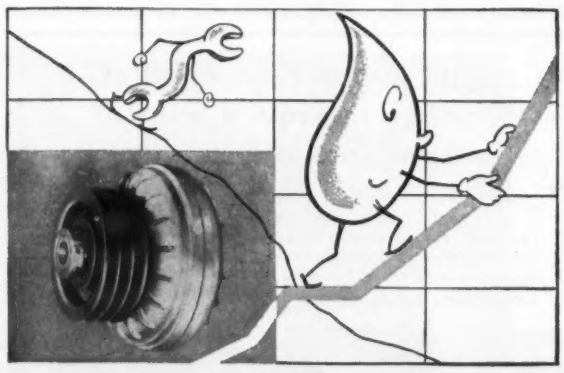
▲ For more details circle NED-379 D on enclosed inquiry slip ▲

RACK CHASSIS SLIDE
locks in three service positions



Exceptionally compact C-300 detent slide for rack and cabinet applications can be installed in the smallest standard W.E. and RETMA drilled rack panel increment, 1¾ in. Slide locks in 90-degree up, horizontal, and 90-degree down positions and supports loads up to 50 lb. Cold rolled steel slides are cadmium plated and coated with a molybdenum disulfide dry film lubricant which withstands pressure loading of more than 50,000 psi at 25 fpm. Tilt-lock slides mount utility as well as component chassis. Lengths of 12, 14, 16, 18, 20, 22, and 24 in. are offered. • **Chassis-Trak, Inc.**, 525 S. Webster Ave., Indianapolis 19, Ind.

▲ For more details circle NED-380 D on enclosed inquiry slip ▲



performance goes up...
maintenance goes down...
when the drive is through fluid!

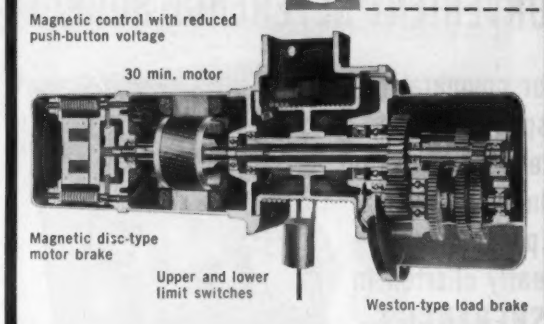
There is no metal-to-metal contact to transmit destructive shocks and vibrations when you use Twin Disc Hydro-Sheave® Drives. There are other "plus" values, too: they provide "fluid drive" in a package that slips right over the motor shaft . . . they reduce motor starting demands . . . protect against overloads and shock loads . . . prevent stalling and motor burn-outs . . . permit smaller size motors . . . provide smooth, fast acceleration. Hydro-Sheave Drives are available at all nominal motor speeds . . . to 50 hp. Fluid Couplings: to 850 hp.

TWIN DISC
Fluid Couplings

TWIN DISC CLUTCH CO. · Racine, Wisconsin

▲ For more details circle NED-381 D on enclosed inquiry slip ▲

R&M HOISTS/CRANES



NEW LOW-COST HOIST

CAPACITIES: ¼, ½, 1, and 2 tons—New Type J wire rope hoists, in three frame sizes, give you important industrial quality features at no extra cost. R&M high torque hoist motor has highest time rating of any in the low price hoist field—30 min., 55° C. Magnetic disc type motor brake, Weston-type load brake, jam-proof upper and lower limit switches—all contribute to long, virtually trouble-free life. Tough aluminum alloy frame. Full magnetic push-button control with reduced push-button voltage. Plain, geared, or motorized trolleys available. Request Bulletin 905 today. **Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio.**

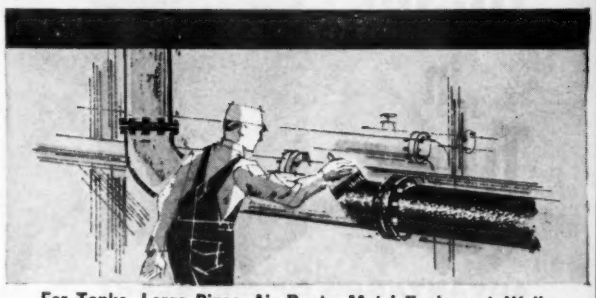
ROBBINS & MYERS

hoists, cranes, Moyno® pumps, motors, Propellair® fans

▲ For more details circle NED-382 D on enclosed inquiry slip ▲

END ALL DRIP AND RUST PROBLEMS IN YOUR PLANT THESE TWO PROVEN WAYS!

Industrial plants know Mortell products offer more positive protection than any other drip-and-rust preventive. Maintenance men know that paints or compounds of paint and fish oil provide little or no permanent protection. Rust-inhibiting NoDrip Plastic Coating is a moisture-proof insulation that *does* stop condensation . . . forms a seamless jacket . . . *does* stop corrosion. NoDrip Tape, with its triple insulating barrier, is equally dependable.



For Tanks, Large Pipes, Air Ducts, Metal Equipment, Walls, Ceilings, Permanently End Condensation Drip, Rust and Corrosion With NoDRIP PLASTIC COATING

The heavy consistency of NoDrip outlasts many coats of paint or ordinary rust-preventives. Permanently insulates and protects. Applies easily with trowel, brush or special spray. Non-toxic, odorless and non-flammable. Resists acid, alkali, brine solutions or vapors. Available in 1, 5 and 55 gallon drums.

For Smaller Pipes or Tubing, Permanently End Condensation Drip, Rust and Corrosion With NoDRIP TAPE

An easy-to-use, wrap-around pipe covering, perfectly pliable, cork-filled, completely self-adhering. Forms an air-tight, 100% vapor- and moisture-proof jacket. Fits snugly even around tees, unions, angles, valves. Cuts maintenance costs—makes out-of-the-way storage areas useable—ends slip and slide floor hazards. No need for vapor seals, brads, fasteners or tools of any kind.

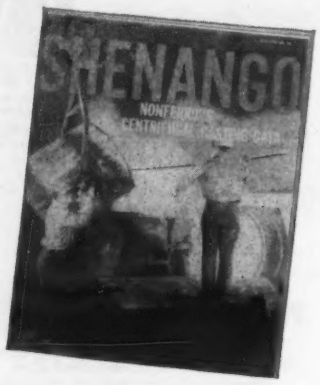
At all leading hardware, mill supply and plumbing jobbers. For complete information and technical handbook, write

Mortell COMPANY
526 Burch Street · Kankakee, Illinois

▲ For more details circle NED-383 D on enclosed inquiry slip ▲

HERE'S A HELPFUL AND CONVENIENT REFERENCE SOURCE

for comparative specifications, chemical analyses minimum physical properties... clearly charted in SHENANGO'S NEW BULLETIN NO. 157



This invaluable chart of nonferrous alloys centrifugally cast by Shenango is readily available upon request. For your free copy, write to this publication or the Centrifugally Cast Products Division, The Shenango Furnace Company, Dover, Ohio

SHENANGO CENTRIFUGAL CASTINGS

COPPER, TIN, LEAD, ZINC BRONZES · ALUMINUM AND MANGANESE BRONZES
MONEL METAL · NI-RESIST · MEEHANITE METAL · ALLOY IRONS · DUCTILE IRON

▲ For more details circle NED-385 D on enclosed inquiry slip ▲

METALSET® A4

Epoxy Resin in Tubes

ADVANTAGES OF METALSET

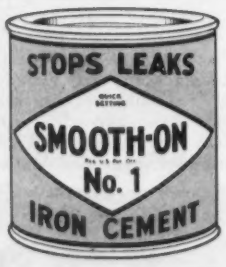
Bonds and cements iron, steel, aluminum, ceramics, concrete. Tough for shock resistance. Packed in self-metering tubes. Also available in 2½, 5, 20 and 100 pound cans. • Water- and oil-proof • Chemically stable.

TYPICAL METALSET REPAIRS

- Stops leaks in tanks, metal roofs, gutters, radiators, pipes
- Caulks conduits, flues, casements, skylights, all sheet metal
- Smooths and fills metal and wooden surfaces
- Machinable; can be drilled, tapped, sanded
- Makes all loose parts tight
- Anchors bolts and screws in wood, concrete, plaster

SMOOTH-ON IRON CEMENT
"SMOOTH-ON NO. 1"

Smooth-On is a dry powder, 70% iron. Mix it with water, it metalizes as it hardens. Resists high temperatures. Expands as it sets to fill a break or hole in any metal. The standard since 1895.
• Smooth-On is a metal filler. Metalset is a coating and bonding compound. Taken together, they meet any emergency.

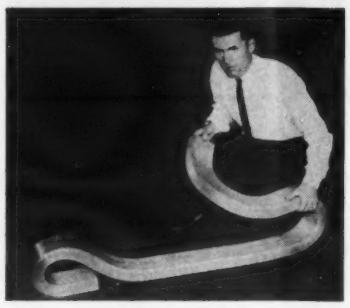


METALSET

Made by SMOOTH-ON MANUFACTURING CO.
672 Communipaw Avenue, Jersey City 4, N. J.

▲ For more details circle NED-386 D on enclosed inquiry slip ▲

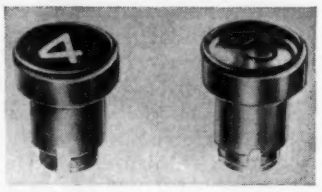
STRETCH-FORMING FILLER
"snake" used for contoured parts



Completely flexible Hobe filler "snake" for stretch - forming of contoured structural metal components is made of thousands of strips of 0.005-in. thick aluminum foil. These strips are stacked and secured to one another to form a snake of any size. Photo shows a snake with one end tucked under and the other folded and twisted laterally to demonstrate the shapes to which it can conform. Snake can be re-used many times and its configuration is altered by machining. It is coiled for storage. • **Hexcel Products Inc.**, 2332 Fourth St., Berkeley, Calif.

▲ For more details circle NED-387 D on enclosed inquiry slip ▲

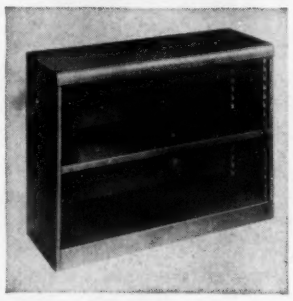
PUSHBUTTON SWITCH CAPS
withstand rough treatment



One - piece aluminum body of these durable caps for Series 50PB Micro Switches and other similar pushbutton switches suits them for use in any electrical installation. Top of cap has a 9/16-in. diameter red or clear plastic insert for luminous indication of the circuit in use. Other colors are available. Stocked plain caps sell for $1.50 and numerically or alphabetically marked caps sell for $1.95 each. • **Sel-Set Machinery Corp.**, Dept. PB, Box 1035, Salem, Oreg.

▲ For more details circle NED-388 D on enclosed inquiry slip ▲

STEEL BOOKCASES
shelves adjust on 1½-in. centers



A two - shelf desk-high model and a seven-shelf library model are offered in steel bookcases with sliding shelves adjustable on 1½-in. centers. Former measures 37⅜ x 29 x 12 5/16 in.; the latter, 86 x 37⅜ x 12 5/16 in. Book stops, 7 in. high, can be used with both models. Desk-high case has rounded front edge on top, whereas the library model has a cornice top. They can be used individually, or joined in continuous rows. Both have gray baked-on enamel finish. • **Lyon Metal Products, Inc.**, 2 Plant Ave., Aurora, Ill.

▲ For more details circle NED-389 D on enclosed inquiry slip ▲

Battery-powered magnets offer improved work handling at low cost

Sundstrand battery-operated lift magnets extend the work range of conventional hoists, cranes, and lift trucks without requiring major capital outlays or tying up equipment while making change-overs.

One lift is all that is required even when work moves from one shop area to another, to an outside loading dock, or to yard for storage because the power source moves right along with the work.

Two capacities

Either 2000 or 4000 lb of lifting capacity is provided by two models using 6- or 12-volt automotive-type batteries. Dial indicates need for recharge, usually is handled overnight.

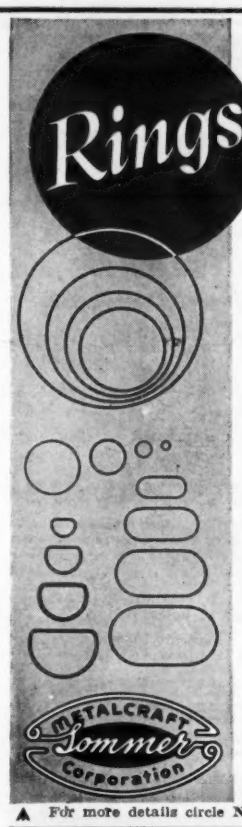
Distributors:

Sundstrand Lift Magnets offer attractive sales opportunities. Investigate. Details on request.

SUNDSTRAND-AMERICAN BROACH
DIVISION OF SUNDSTRAND CORPORATION
ANN ARBOR, MICHIGAN

▲ For more details circle NED-390 D on enclosed inquiry slip ▲

Rings ... one of many wire products we make



Let Sommer solve your ROUND wire ring problems—including ring assemblies such as fan guards, grills, etc. Butt-welded and unwelded rings are our specialty.

Any gauge of wire up to ¼"—any sizes up to 24" in diameter, Sommer's modern, high-production equipment assures close-tolerance job specifications. Complete facilities for making "D" and oval rings as well.

Finishes include baked enamel, cadmium, brite zinc, brite nickel, nickel chrome, and mill finishes.

Let us work with you in designing and producing any wire shapes or forms you require. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER
METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle NED-391 D on enclosed inquiry slip ▲

NEW SHELDON 15" PRECISION LATHE

New: Revolutionary double-box Headstock (Pat. Pend.) "WORK-HOLDING-ONLY" Spindle. Single-Shift Back Gear Lever on Headstock. Headstock and Apron running in oil. 1½" Hole through Spindle. 60-pitch Gear Box with built-in Lead Screw Reverse. Amazing LOW PRICE.

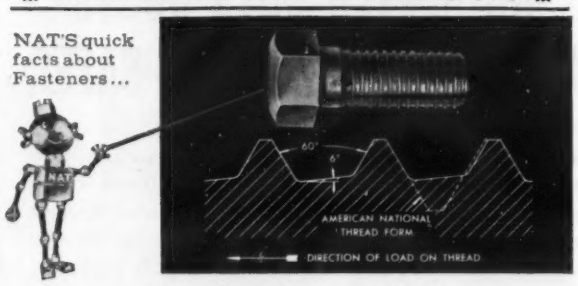
Different: Spindle rigidly held in two large "Zero Precision" tapered roller bearings arranged in new box-type design. Electrical switches and push-button stations fully enclosed in built-in well in headstock. Two independent clutches in apron for selecting power feeds. Cam-action tailstock clamp for rapid release and instant locking of tailstock. Triple, cogged, V-belt outboard drive—eliminates intermediate shafts—delivers more power to spindle.

This all new lathe bridges the gap between conventional belt driven and geared head lathes. It combines capacity and power with economy and flexibility, with 5', 6' or 8' beds.

Write for Circular
SHELDON MACHINE CO., INC. 4222 Knox Ave. Chicago
See us at ASTE Show—Detroit—April 21-28 Booth 1727

▲ For more details circle NED-392 D on enclosed inquiry slip ▲

NAT'S quick facts about Fasteners...



Can any fastener actually become tighter in service?

WELL, HARDLY. NOT JUST *ANY* FASTENER...

LOK-THRED® bolts, studs and screws do . . . require as much as 70% more torque for removal than for tightening.

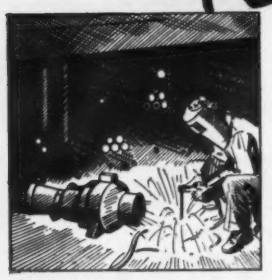
That 6° converging angle of the extra-wide root is the reason. It re-forms the metal of the receiving thread to squeeze out every void . . . becomes, in effect, a tapered wedge that pulls tighter under load. Self-sealing and re-usable, too.

Let us show you how LOK-THRED provides better holding power. Ask for the LOK-THRED booklet.

The National Screw & Mfg. Company
Cleveland 4, Ohio
Los Angeles 22, Calif.

▲ For more details circle NED-393 D on enclosed inquiry slip ▲

Ventilate CONFINED Places with Vano Design "C" Ventilator-Exhauster

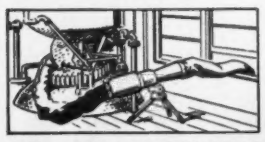


WELDING FUMES are here removed by this Vano Ventilator-Exhauster.

Ideal for withdrawing welding fumes from confined places or directly from the welding rod. Provides greater safety, greater comfort for workers . . . leads to greater work efficiency. Can be furnished with 8" suction inlet to which 8" non-collapsible suction tubing may be attached . . . or provided with multiple inlet nozzles for 5", 4" and 3" suction hose.

Other types are also available for supplying fresh air to men working in confined places, such as tanks, manholes, drums, boilers and shipholds.

For full details on Coppus Vano Design "C" Ventilator-Exhauster write COPPUS ENGINEERING CORPORATION, 404 Park Avenue, Worcester 2, Mass.



FUMES FROM A REACTOR KETTLE are here withdrawn by tripod-mounted Vano Ventilator-Exhauster. Note non-collapsible suction tubing and discharge tubing.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

▲ For more details circle NED-394 D on enclosed inquiry slip ▲

MRC PILLOW BLOCKS and FLANGE UNITS with Labri-Seal® BALL BEARINGS

NEW MRC Labri Seals® combine the advantages of
→ a rotating flinger
→ labyrinth seal
→ positive contact synthetic rubber seal

SELF ALIGNING
POSITIVELY LOCKING
PERMANENTLY LUBRICATED

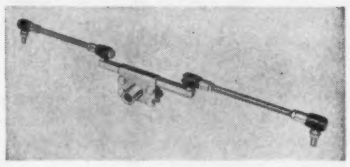
Write for FORM 1550 8 pages 8½"x11"

MARLIN-ROCKWELL CORPORATION Jamestown, N.Y.

MRC BALL AND ROLLER bearings

▲ For more details circle NED-395 D on enclosed inquiry slip ▲

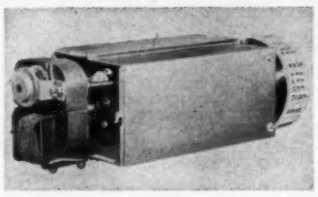
RACK & PINION STEERING
packaged small vehicle assembly



Lightweight steerable vehicles and equipment, including garden tractors, golf carts, and boats, can be equipped with this inexpensive rack and pinion steering assembly. Package consists of four sealed ball joints, the rack and pinion, and assembly hardware. Design is flexible enough to permit installation of a variety of vehicle sizes and types. Several linkages, including quick-disconnect types, are offered. Steering or control column is secured to the pinion with a simple lock pin. Assembly accommodates a ⅝ or ½-in. diameter steering shaft and its width is 25 in. ±⅞-in. adjustment. Retail price is $14.95 and OEM production price is $4.50. • **Superior Ball Joint Corp.**, 9065 Trier Rd., Ft. Wayne, Ind.

▲ For more details circle NED-397 D on enclosed inquiry slip ▲

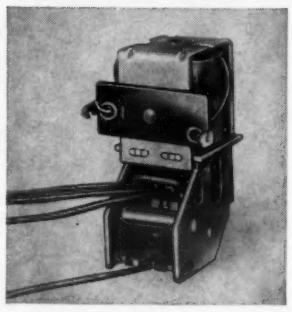
TIMER SWITCH
has cams for up to 24 circuits



Designed for constant duty service, the XD timer switch with forced advance drive has ample torque for actuating devices added directly to the drive shaft. The intelligence drum can be provided on the drive shaft to indicate cycle position continuously. Optional cam-operated snap-action switches for up to 24 circuits will provide sub-interval switching impulses. Standard rating is 115 v, 15 amp, and isolated circuits can be 250 v, 25 amp. • **Electronic Timers Co.**, Warsaw, N. Y.

▲ For more details circle NED-398 D on enclosed inquiry slip ▲

SEQUENCE RELAYS
remotely operate controls, circuits



Remote operation of appliances, models, TV controls, and lighting circuits is typical application for Series 4100 ac-dc sequence relays. Coil requires ¾ w and has 10,000-ohm impedance with operating voltage to 117 v ac. Minimum operating speed is 30 milliseconds. Contacts, rated up to 5 amp at 24 v ac, can be double-pole double-throw with intermediate "off," or single-pole triple-throw with one "off" position. Vertical mounting is standard; horizontal mounting optional. • **Lionel Corp.**, 28 Sager Place, Irvington 11, N. J.

▲ For more details circle NED-399 D on enclosed inquiry slip ▲

Do You Use Bronze Powder Finishes?

Bronzeless GOLDS

---COST LESS (more mileage)
----NEVER Tarnish
-----NON-GELLING
------Supplied READY MIXED

Write Now for Bulletin L-460 and Color Chips

BEE CHEMICAL COMPANY LOGO DIVISION
12933 South Stony Island Avenue, Chicago 33, Illinois
Phone: Mitchell 6-0400
GARDENA, CALIFORNIA • HARTFORD, CONNECTICUT

▲ For more details circle NED-400 D on enclosed inquiry slip ▲

It's Brand New!

THE REMARKABLE Dillon MODEL P SCALE

OUTSTANDINGLY ACCURATE!
COMPLETELY AUTOMATIC!
FULLY GUARANTEED!

SEALED BY BUREAU OF WEIGHTS & MEASURES • LEGAL FOR USE IN TRADE

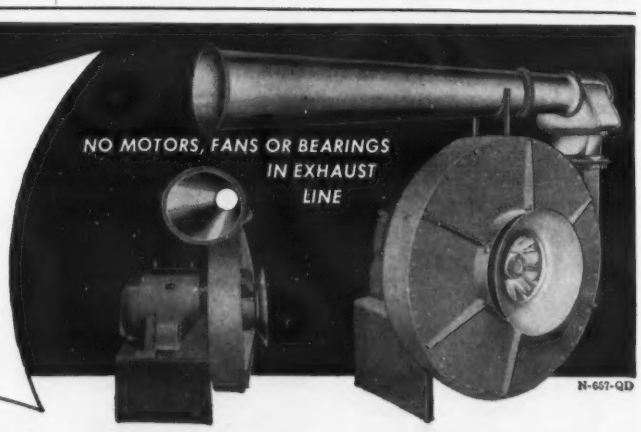
8 different capacities: 0-250, 0-500, 0-750, 0-1000, 0-2500, 0-5000, 0-7500 and 0-10,000 lbs. — ALL accurate to within 1/10 of 1% of full range! Sealed by Bureau of Weights & Measures prior to shipment. Large, 16" dial. Quick-set knob cancels out tare loads instantly. Ball bearing swivel hook, sealed mechanism, strong plastic crystal over dial. Shock-proof and full dampened against vibration. Truly America's *finest*, automatic suspension scale yet priced LOW to suit the average shop budget.

COSTS YOU NOTHING TO INVESTIGATE. WRITE FOR PROFUSELY ILLUSTRATED BROCHURE AND FULL COLOR PICTURE. W69

W.C. Dillon & CO., INC. 14578NE Keswick Street Van Nuys 1, Calif.

▲ For more details circle NED-401 D on enclosed inquiry slip ▲

Now . . . you can reduce bulk materials handling costs with Quickdraft high pressure exhausters



FOR MOVING:
Cement, Sand, Iron Oxide, Wheat, Corn, Salt, Limestone, Castor Beans, Knots, Blocks, Paper, Wool, Cotton, Oats, Rags, Rubber, Vegetables, Coal (Powdered), Shavings, Cork, Sawdust . . . and any other materials that can be moved by air!

IMPORTANT NOTICE
For resisting abrasive action, Quickdraft units can be rubber lined. For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (PVC), and with plastic and Fiberglas coatings.

Time and maintenance savings usually pay for Quickdraft high-pressure exhausters in 6 to 18 months on materials handling jobs. Because material does not pass through blower, maintenance is negligible. Downtime for cleaning and replacing fans, motors and bearings is eliminated. Quickdraft units are also ideal for exhausting paint spray, abrasives, corrosive gases, noxious fumes and high temperatures. For Quickdraft engineering data on materials handling, industrial exhausting, heating plant venting, write today!

Patent Nos. 2,722,372 and 2,855,874. Other Patents Pending. Covered By Exclusive Foreign Patents.

TYPICAL EXAMPLE: Ideal for moving trim from paper, cellophane and plastic slitting machines. (Models range from 4 in. to 30 in. diameter — with 1/6 to 600 H.P. motors — with negative static pressures from 1/4 in. to 60 in. W.G.)

Quickdraft corporation
P.O. Box 87-L • Canton 1, Ohio

Well known for power draft units for all types of heating plants.

▲ For more details circle NED-396 D on enclosed inquiry slip ▲

RACKS-BALCONIES-SHELVING AT ½ THE USUAL COST

with either ORDINARY PIPE, CHANNEL or I-BEAM

USE & RE-USE BOTH PIPE & CLAMP INDEFINITELY IN 1000 WAYS!

FREE STORAGE RACK REFERENCE LIBRARY

YOU WILL RECEIVE:

- Be Your Own Storage Rack Expert (24 pg. illustrated course)
- A World of New Uses For Pipe
- Capacity Graphs for Standard Channel, I-Beam or Pipe
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- ...and many other valuable pieces!

FOR FREE LIBRARY MAIL TO TUBE-STRUT CORP. 2960 Marsh St. Los Angeles 39, Calif

NAME _____ NED-4

FIRM _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

▲ For more details circle NED-402 D on enclosed inquiry slip ▲

BEARINGS Only 2¢ each

amazing ... but true!

Yes, it is amazing ... but true ... how few men who specify components realize that these simple Hartford Ball Retainers provide efficient bearings for hundreds of high volume items at a cost as low as 2 cents each. Hartford Ball Retainers possess exceptional strength and durability. They offer many advantages over shouldered bushings, notably low starting friction, lower operating friction, ease of operation, longer life span and increased thrust capacity. Hartford Ball Retainer applications and uses are almost limitless, ranging from electrical devices to heavy duty door hinges. Can be supplied with chrome alloy, stainless steel, brass or nylon balls, at moderate prices.

Hartford publishes separate guides for Thrust Retainer and Angular Contact applications. Specify your need when writing.

Specify Hartford RETAINERS

Hartford Steel Ball Co., 83 Jefferson Ave., West Hartford, Conn.

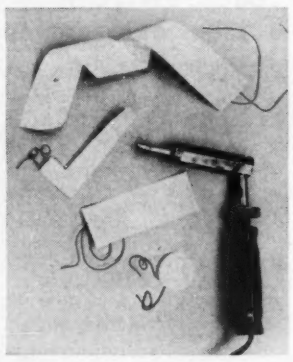
▲ For more details circle NED-403 D on enclosed inquiry slip ▲

PERSPIRATION GAGE
checks hands for delicate handling

Hand perspiration of personnel being considered for delicate handling work is measured instantly by the Permeter. Worker simply grasps the handle. Perspiration is measured on a scale upon which the individual manufacturer can establish his own minimum or maximum standards. Instrument will aid in the manufacture of electronic components, transistors, switches, watches, photographic supplies, surgical instruments, firearms, precision tools, and optical goods. • Ameresco Inc., 7 Center Ave., Little Falls, N. J.

▲ For more details circle NED-404 D on enclosed inquiry slip ▲

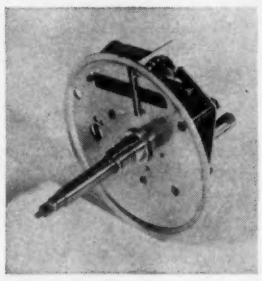
HEATING ELEMENTS
flexible type is easily applied



Thermosensitive adhesive is used to bond Heetstrip flexible heating elements to various surfaces. After quick application, they will not soften with heat, water, or solvents. Elements weigh less than 2 oz per square foot and are only 0.025-in. thick. They are a sandwich of dielectrically treated glass cloth with a heat dissipating film that provides a uniform heated surface. Stock and specifically engineered sizes are offered. • Therm-O-Lab Corp., 6940 Farmdale Ave., North Hollywood, Calif.

▲ For more details circle NED-405 D on enclosed inquiry slip ▲

ELECTRIC CLOCK MOVEMENT
front, bottom, and back set types



Only 1 in. deep with 3-in. diameter, the Series F-77 electric clock movement has a 2-in. long arbor for use in illuminated clocks. It attaches to ½ in. or thinner panels by threaded center mount with a flat to prevent turning. Threaded second hand shaft and arbors fit standard hand sockets. Movement has a 1.25-w permanent magnet motor with instant starting direction control. Front, bottom, or back set types are offered for 115 v, 60 cycle ac use. • William L. Gilbert Clock Co., Winsted, Conn.

▲ For more details circle NED-406 D on enclosed inquiry slip ▲

One Source Service for OIL SEALS RUBBER PARTS LEATHER BELTING and PACKINGS

Extensive manufacturing and research facilities, plus over 66 years of experience, are behind every CHICAGO-ALLIS product or service.

When you buy shaft or face seals, molded rubber parts, packings, mechanical leathers, or power transmission belting, specify CHICAGO-ALLIS. Three divisions to serve you—call the CHICAGO-ALLIS rep. in your area.

Write today for this fully illustrated FREE catalog on all CHICAGO-ALLIS products and services.

SINCE 1890 *Chicago-Allis Engineers to Your Specifications*

CHICAGO-ALLIS MFG. CORP.

Producers of CHICAGO BELTING • ALLIS RUBBER • ALLIS SEAL Products

130 NORTH GREEN STREET • CHICAGO 7, ILL.

SEE US AT 1960 DESIGN ENGINEERING SHOW, NEW YORK CITY, MAY 23-26

▲ For more details circle NED-407 D on enclosed inquiry slip ▲

FOR FANNING HARD-TO-HANDLE SHEETS

New Design. Magnetically powered with ERIUM*

ERIEZ HI-POWR

Ceramic magnetic

SHEET FANNERS

Strongest sheet fanners made! New magnetic circuit design gives stronger, snappier fanning action for semi-sticky, bent and heavy-gauge sheets. Increases production . . . greater safety factor . . . saves manhours . . . eliminates marred surfaces and "doubles". For sheets up to ⅛" thick, stacked up to 14" high.

Marked improvement in handling heavier sheets—up to .125" thick • Enclosed, embedded magnetic circuit is tamperproof, rugged • Stainless steel U-frame construction • Easily fastened to any flat surface. **Powered by ERIUM—an exclusive, high quality permanent magnetic power source specifically designed and energized by Eriez.*

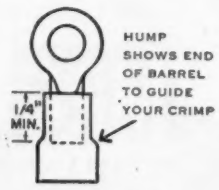
GET COMPLETE DETAILS. WRITE TODAY TO: Eriez Mfg. Co., 80-DA Magnet Drive, Erie, Pa.

ERIEZ

▲ For more details circle NED-408 D on enclosed inquiry slip ▲

SPECIAL PLASTIC INSULATING SLEEVE now available on most ETC solderless terminals and connectors

INSULKRIMP*



The permanently attached sleeve is tough and rigid—can't slip off, break or unravel. INSULKRIMP* terminals are applied with one quick crimp—no more time lost insulating with tubing or tape. Plastic sleeve also supports the wire insulation, giving increased resistance to vibration. Sleeves are color-coded for wire range. Write for samples, prices.

*Trade Mark

ETC INCORPORATED 990 East 67th Street, Cleveland 3, Ohio

▲ For more details circle NED-409 D on enclosed inquiry slip ▲

MICRO SWITCH Precision Switches

NEW center-neutral "Plug-in Limit" switch has 2 basic switches

Now, control four isolated circuits in one limit switch. New unit has two double-break, snap-action switches and is designed for equipment that has parts moving in two directions. Neither switch operates in center position. Plug-in design saves time and costs—replaces in less than a minute. Best oil-tight seals available. Ask nearby MICRO SWITCH distributor for Data Sheet 168 or call the branch office listed in Yellow Pages.

MICRO SWITCH . . . FREEPORT, ILLINOIS
A division of Honeywell
In Canada: Honeywell Controls Limited, Toronto 17, Ontario

Honeywell
MICRO SWITCH Precision Switches

▲ For more details circle NED-410 D on enclosed inquiry slip ▲

Look what an (MB) Line Marker does!

Easy to operate, low in cost, M-B Line Markers are your best buy for fast marking of safety lines in aisles, around machines, storage areas, etc. — preventing possible accidents and guiding production flow. Self or hand-propelled models lay up to 10,000 feet of line per hour . . . single or double lines, solid or intermittent, 3" to 6" width. Send today for complete details on the most versatile line marker, especially designed for industrial use. The M-B Corporation, New Holstein, Wisconsin.

M-B CORPORATION NEW HOLSTEIN, WIS. Refuse Packers Line Stripers • Sweepers

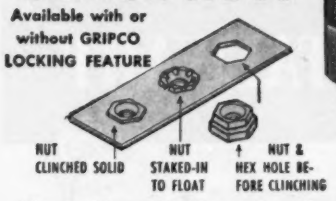
QUALITY EQUIPMENT SINCE 1907

For more details circle NED-411 D on enclosed inquiry slip

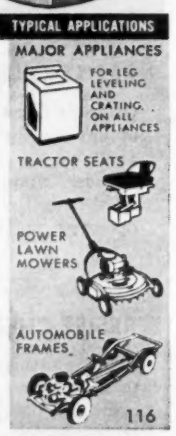
For "fixed" fastenings or "hard-to-reach" assemblies

USE GRIPCO CLINCH NUTS

Available with or without GRIPCO LOCKING FEATURE



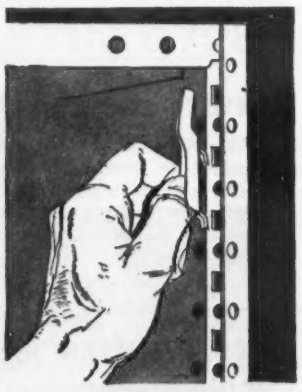
For positive attaching of a threaded medium to thin metals. They are clinched solid for a rigid application, or staked in with a six point staking punch for a floating effect. Can be automatically fed and clinched. Gripco Clinch Nuts can be clinched or staked with hydraulic or air equipment. Large inventories carried for immediate shipment. Full details available—write for samples and NEW CATALOG today.



GRIP NUT COMPANY
106 Maple Ave.
South Whitley, Ind.

For more details circle NED-412 D on enclosed inquiry slip

NEW from Republic COMPRESSION SHELF CLIP



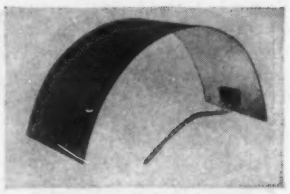
Designed to ease and speed steel shelving erection. No tools needed, Clip slips firmly into upright slots. Simply slip clips onto upright, snap shelf in place. All shelves can be clipped on; no studs or bolts needed. Clip shelving supports heavy loads safely.

One man can erect any given assembly of Republic Clip Shelving quicker and easier than ever before. Simple shelf rearrangement and long life make Republic Clip Shelving a profitable investment. Shelves, uprights, and accessories are Bonderized; Clips are cadmium plated. Write for catalog.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

For more details circle NED-413 D on enclosed inquiry slip

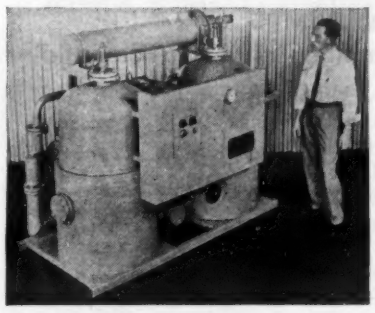
FLEXIBLE ELECTRIC HEATERS made of waterproof silicone rubber



Flexible, waterproof, very thin, and made in any plane shape, silicone rubber heaters are adaptable to almost any area requiring heat at up to 450° F. Sizes range to 10 x 3 in. Rated 75 ohms per sq in., heaters can be designed for any voltage or current, operating temperature, size, shape, and thickness. They are attached to any surface by a metal backing, pressure-sensitive adhesive, or special holding devices. Leads of any length can be brought out where desired. • Watlow Electric Mfg. Co., 1376 Ferguson Ave., St. Louis 14, Mo.

For more details circle NED-414 D on enclosed inquiry slip

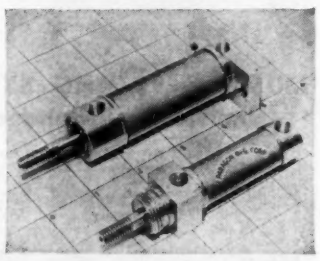
COMPRESSED AIR DRYER dual-adsorber unit is automatic



Operating on a 6-hr, alternating recharge cycle, the Type BZ dual-adsorber compressed air and gas dryer adsorbs moisture, heats for regeneration, and cools automatically. Only attention required is an occasional lubrication. Usable for instrument line service, it has adequate instrumentation for checking operation at a glance. Pressure-reactivated dryer is rated for 40 to 150 psi, optional to 300 psi. • McGraw-Edison Co., Pittsburgh Lectrodryer Div., 32nd Street, Pittsburgh 30, Pa.

For more details circle NED-415 D on enclosed inquiry slip

MINIATURE CYLINDERS for air and hydraulic service



Suited for air to 250 psi and hydraulic service to 750 psi, Paramite miniature cylinders are made with ¾, 1, and 1 3/16-in. bores and strokes to 10 in. or more. They have U-cup packings, honed steel barrels, compact design with heads permanently attached to barrel, bronze rod heads, and hard chrome plated rods. Available types include single-rod double-acting, double-rod double-acting, spring return, and 420 stainless steel rod models. • Paragon Mfg. Co., 1179 E. 134th St., Cleveland 10, Ohio.

For more details circle NED-416 D on enclosed inquiry slip

Republic METAL LUMBER ...faster, stronger, safer framing

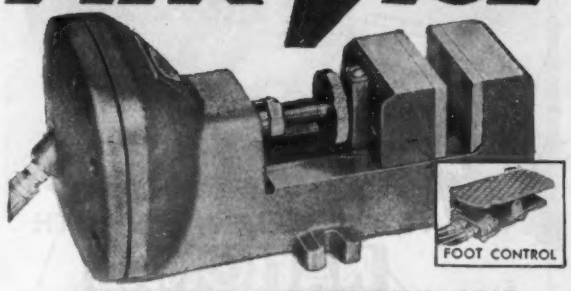
Republic METAL LUMBER® solves framing problems fast. Simply measure, cut, assemble, with bolt and nut fasteners. Slotted angle pattern provides greater flexibility. Made of cold rolled steel for greater strength. Bonderized and enameled.

Available in two gages, two widths, in standard bundles of 10- or 12-foot lengths, which include self-locking bolts and nuts. Order from your Republic-Berger warehouse. Write for data.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

For more details circle NED-417 D on enclosed inquiry slip

Speedy AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... **$44.00**

SPEEDY AIR REGULATOR Regulates pressures 0 to 140 lbs. No. 622 $7.25

SPEEDY AIR FILTER Assures clean, oil-free air. No. 140 $4.00

SPEEDY UNIT Production spray unit with Ext. Mix Gun. No. 705 $26.50

Order from Your Supplier or Write for Air Tool Catalog

W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

For more details circle NED-418 D on enclosed inquiry slip

"Who offers the most at the RIGHT PRICE on short run stampings?"

FEDERAL

SHORT RUN STAMPINGS — 3 PLANTS To Serve You Better

Freddy Federal says: "Behind every Federal stamping quotation stand the cost-cutting resources of modern one-stop facilities . . . experienced craftsmen personally interested in your satisfaction . . . and a big stock of standard tools and fixtures available for use on your job *without charge.* You often save up to 80% on tooling costs at Federal! Most parts deburred *without cost.* Send us your print or part today for an airmailed quotation. If time is short, ask for reply by phone or wire. To get the most at the right price, always contact Federal!" *Let us send you catalog No. 301 with money-saving stamping design tips!*

SEE US AT THE 1960 ASTE TOOL SHOW—BOOTH 950—APRIL 21-28

FEDERAL TOOL & MFG. CO. 3618 Alabama Avenue Minneapolis 16, Minn.
FEDERAL SHORT RUN STAMPING, INC. 918 Lyell Avenue Rochester 6, New York
FEDERAL STAMPING CO. 7318 Atoll Avenue No. Hollywood, California

For more details circle NED-419 D on enclosed inquiry slip

REPUBLIC Steel Lockers ...pilfer-free protection

Protect employee valuables, clothing, tools, with strong, sturdy, pilfer-proof Republic Steel Lockers. Available with any of the popular locks. Handle is attached with two tamper-free Gulmite screws and lockwashers.

Call your Republic-Berger representative. He will help you with your locker planning and assume full responsibility for complete installation.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

For more details circle NED-420 D on enclosed inquiry slip

Automation TO FIT YOUR NEEDS WITH NATIONAL INTERVAL TIMERS

The rugged, accurate, and flexible instant reset dial set timer will operate alone for timed interval or time delay or in sequence to control the most complex process cycle . . . synchronous motor driven in 13 timing ranges from 60 cycles full dial to 60 hours . . . in any mounting or enclosure or as a complete center.

Write for Bulletin 203

National Time & Signal Corp.
21800 Wyoming • Detroit 37, Mich.

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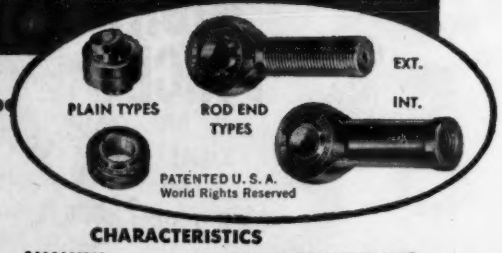
SOUTHWEST "Monoball" SELF-ALIGNING BEARINGS



CHARACTERISTICS

ANALYSIS	RECOMMENDED USE
1 Stainless Steel Ball and Race	For types operating under high temperature (800-1200 degrees F.).
2 Chrome Alloy Steel Ball and Race	For types operating under high radial ultimate loads (3000-893,000 lbs.).
3 Bronze Race and Chrome Steel Ball	For types operating under normal loads with minimum friction requirements.

Thousands in use. Backed by years of service life. Wide variety of Plain Types in bore sizes 3/16" to 6" Dia. Rod end types in similar size range with externally or internally threaded shanks. Our Engineers welcome an opportunity of studying individual requirements and prescribing a type or types which will serve under your demanding conditions. Southwest can design special types to fit individual specifications. As a result of thorough study of different operating conditions, various steel alloys have been used to meet specific needs. Write for Engineering Manual No. 551. Address Dept. NED60

SOUTHWEST PRODUCTS CO.
1705 SO. MOUNTAIN AVE., MONROVIA, CALIFORNIA

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Fasten and Seal at ONE time

WITH SHAKEPROOF SEALING FASTENERS

Eliminate separate assembly operations . . . end separate handling, "messy gobbing." Compounds stable from −20° to 230° F. Shakeproof Sealing Fasteners include Lock Washers, Sems (pre-assembled screw and lock washer), KEPS® (pre-assembled nut and lock washer) and Thread-Cutting Screws.

Write for samples today!

SEAL OUT WATER, OIL, GASOLINE, AIR!

SHAKEPROOF "Fastening Headquarters"
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois

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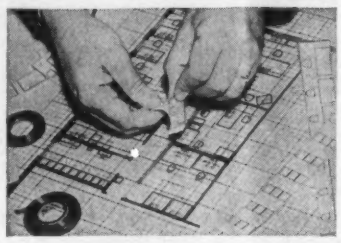
SELF-STICK DRAFTING AIDS
for layouts, drawings, charts



Clearly printed on shrink-resistant, transparent, pressure-sensitive adhesive plastic, tapes, templets, grid sheets, die cut symbols, numbers, and letters are available for engineers, designers, and other users of drafting materials. Originals made with these drawing aids can be reproduced by standard methods. Over 2000 items are offered including templets of office equipment and machine tools. Tapes and templets are suited for making graphs, charts, plant and office layouts, printed circuits, presentations, displays, and organization plans. • **Applied Graphics Corp.**, Glenwood Landing, L. I., N. Y.

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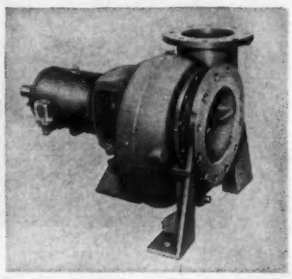
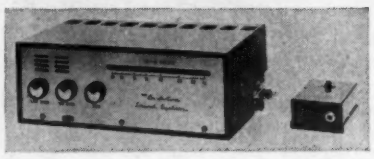
CENTRIFUGAL PUMPS
larger, smaller models augment line



An 8-in. and two ⅜-in. models have been added to the Worthite centrifugal pump line. The ⅜-in. models have corrosion resistant liquid ends and either a standard packed box or internal mechanical seal. Both frame mounted and Monobloc designs are offered in these continuous duty pumps. The 8-in. twin-volute pump has a three-part liquid end consisting of suction cover, volute, and stuffing box head with integral water jacket for either heating or cooling. Double support enables this pump to be disassembled from the rear without disturbing volute, suction head, and piping. Hooked type Worthite shaft sleeve may be installed over the solid Worthite shaft when a packed box pump is desired. • **Worthington Corp.**, Harrison, N. J.

▲ For more details circle NED-425 D on enclosed inquiry slip ▲

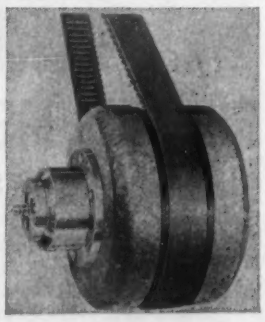
MUSIC & PAGING SYSTEM
music is suspended during paging



Model 1005 FM background music and paging system consists of an ultrasensitive no-drift FM tuner complete with AFC, 7-w audio amplifier, and relay system. Reception is automatically suspended when paging is in progress. Relay system works with optional Model 1006 microphone junction box for remote silencing of FM reception. External amplifiers can be used for greater than 7-w audio power. Electronic squelch circuit to silence commercials is controlled by front panel switch. Individual volume controls for reception and paging are provided. Any number of remote microphones can be used up to 1000 ft without loss in volume. • **Trutone Electronics, Inc.**, 6912 Santa Monica Blvd., Hollywood 38, Calif.

▲ For more details circle NED-426 D on enclosed inquiry slip ▲

VARIABLE SPEED PULLEYS
1 to 5-hp units use narrow V-belts



Constant speed under overload conditions, automatic belt tensioning to continuously match the load, and constant belt alignment are advantages of the cam and cam follower assembly incorporated in each of five Hi-Lo variable speed pulleys. Offered with adjustable motor bases, ⅞ to 1 7/16-in. wide V-belts, and sheaves, the pulleys have 3:1 adjustable speed ratios. They are rated for 1, 1½, 2, 3, and 5-hp motors at 1750 rpm, and ¾ to 3¼-hp motors at 1150 rpm. Instant speed changes are made with only fingertip pressure while the machine is running. Standard bore sizes are ⅝, ¾, ⅞, 1, and 1⅛ in., and bore lengths are from 2½ to 3⅝ in. • **Lovejoy Flexible Coupling Co.**, 4941H W. Lake St., Chicago 44, Ill.

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• *Centerless Ground to extreme accuracy. Special new-type Equipment, assures concentric chamfered or formed ends—no cut-off burrs.*

Dowel—Straight—Countersunk—Angle and Spherical Ends
.020" to .1875" Diam.
.125" to 2" Length

Precise Specifications
Accurately met. If requested on order, a surface analysis tape, showing surface in micro-inch measurements, will be furnished. Tape magnifies 39,370 times.

Small orders or volume production to your exact requirements and material specifications.

Quality Precision Work!
Prompt Deliveries!
Prices you will like!
SEND US PRINTS FOR QUOTATION

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NEW VITON*
*Viton is a trademark of the DuPont Company
RUBBER PARTS BY STALWART

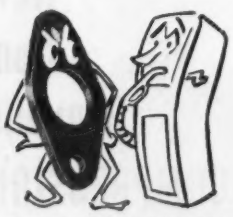
RESIST OILS

Offer the finest fluid resistance of any synthetic rubber now available . . . retain strength and resiliency where ordinary synthetics fail under similar operating conditions.

RESIST CHEMICALS

Provide unsurpassed resistance to a wide range of solvents, acids and bases at accelerated temperatures...maintain their stability when other compounds deteriorate.

RESIST FUELS



Will not shrink or swell when exposed to commercial fuels, fluids and lubricants, including exotic fuels . . . assure dependable performance under severe attack.

8846-SR

RESIST TEMPERATURES

Withstand temperatures up to 450° F. in continuous service ...up to 600° F. in intermittent service . . . have fireproofing qualities equivalent to stainless steel.

SEND TODAY FOR NEW STALWART CATALOG

The world's largest producer of silicone custom rubber parts

STALWART RUBBER COMPANY
151 Northfield Road, Bedford, Ohio

Northfield Road, Bedford, Ohio. Manufacturing facilities in Jasper, Georgia and Bedford, Ohio.

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IDEA FOR LOW-COST PRODUCTION LINE

Build your own assembly lines with inexpensive angle-iron tracks and these novel Bassick grooved wheel casters. They give you easy flow of parts and finished products . . . better utilization of floor space . . . economical means of handling heavy loads . . . money-saving protection of floor surfaces. Equally useful in solving materials handling and product assembly problems. 8-page brochure gives the facts. THE BASSICK COMPANY, Bridgeport 5, Conn. *In Canada:* Belleville, Ont. 0.4

▲ For more details circle NED-430 D on enclosed inquiry slip ▲

▲ For more details circle NED-431 D on enclosed inquiry slip ▲

GET BULLETIN 5725

and find out about...

Yes, find out about the special design and manufacturing techniques that make an important difference...*put a plus value* in Rex Roller Chain. Learn about the rigid quality control that gives you a better chain...consistently.

Bulletin 5725 explains why Rex Roller Chains last longer ...why Rex Roller Chains have greater resistance to fatigue and failure. Write today for your copy of Bulletin 5725, "The Plus Values in Rex Roller Chain." CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN Belt, (Canada) Ltd., 1181 Sheppard Ave. East, Toronto, Ontario

CHAIN BELT

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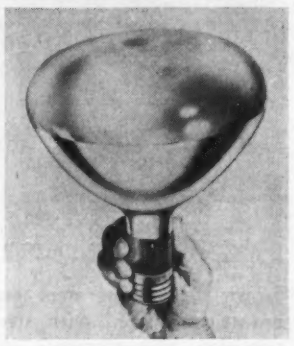
NARROW BEAM SPOT LAMP
750-w size projects 50,000 cp



High plant bays, yards, and docks, are among long distance lighting applications for the R60 narrow beam spotlight lamp of 750 w. Available in standard voltage, it has a mogul screw base, internal silver reflector, and will burn in any position. Hard glass bulb resists rain, snow, and sudden temperature changes. Average rated life of the 50,000-cp lamp is 2000 hr. Price is $14.20. • Radiant Lamp Corp., 300 Jelliff Ave., Newark 8, N. J.

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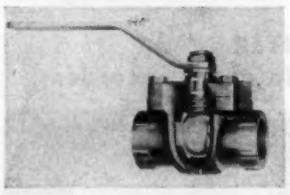
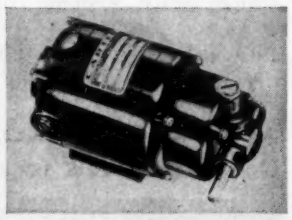
BALL VALVES
handle fluids, semisolids, gases



Pressure may be applied from either side of McCannaseal and McCannaflo ball valves. As pressure increases, the seal becomes tighter. They handle most fluids, semisolids, and compressed gases and air, and withstand temperatures up to 350° F and pressures to 700 and 1000 psi, respectively. Standard body metals are stainless and cast steels, ductile iron, cast iron, and bronze. Valve balls are chrome plated carbon steel, bronze, or stainless steel. Sizes from 1/4 to 6 in. have screw or flange connections. • Hills-McCanna Co., 4600 W. Touhy Ave., Chicago 46, Ill.

▲ For more details circle NED-434 D on enclosed inquiry slip ▲

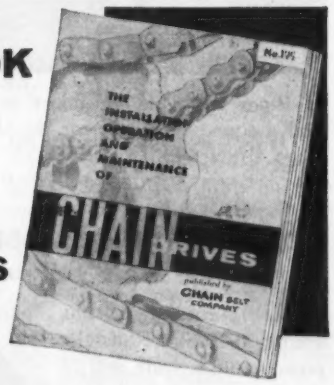
GEARMOTOR
shaft outputs from 10 to 750 rpm



Ten standard single and double worm reduction models of this Classic gearmotor are available with shaft outputs ranging from 10 to 750 rpm. Motor provides power for business machines, computers, medical equipment, electronic and geophysical equipment, movie cameras, teleprinters, scientific instruments, and duplicating machines. High speed first gear is of fiber for minimum noise, whereas low speed gear is bronze for maximum torque. Shaft position is easily changed to six 30-degree positions by means of six screws. Units with universal, shunt, or series motors are rated 12 to 220 v input and weigh about 5 lb. Over-all size is 6 x 3 5/16 x 3 3/8 in. • Carter Motor Co., 2700 W. George St., Chicago 18, Ill.

▲ For more details circle NED-435 D on enclosed inquiry slip ▲

FREE BOOK tells you how to make your drive chains last longer



Thousands of chain drive dollars have been saved—countless down-time hours have been eliminated—by following the suggestions given in the new booklet, "Care and Maintenance of Chain Drives." Send for your free copy today.

CHAIN BELT

CHAIN Belt Company
4686 W. Greenfield Ave., Milwaukee 1, Wis.
(In Canada: CHAIN Belt (Canada) Ltd.
1181 Sheppard Ave. East, Toronto)
☐ Please send new booklet, "Care and Maintenance of Chain Drives."
☐ Have a Rex Man call.
Name.....
Company.....
Address.....
City.....*Zone*.....*State*.....

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SAVE — MONEY — TIME — ENERGY

LEXCO HYDRAULIC LIFT TABLES

Capacities 500# to 10,000#.

Portable, adjustable height, Hand or Foot Operated. For lifting and transporting heavy castings, dies, etc., to machines and Presses.

Also Die Handlers—Strip Stock Handlers—Roll Handlers.

LEXCO ENGINEERING & MFG. CORP.

20 W. Chestnut St. • Souderton, Pa.

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SAFETY GRIP-STRUT

Patented

STAIR TREADS

for greater safety • for greater economy

Use Safety GRIP-STRUT stair treads throughout your plant, on your manufactured products for greater anti-skid protection. All one piece of material with open area in excess of 55% total area, easy to flush clean, greater strength with less weight, in steel or aluminum.

Available at Globe Distributors in all principal cities. Consult yellow pages in your phone book under "stair treads."

PRODUCTS DIVISION

THE GLOBE COMPANY
4002 S. PRINCETON AVE. • CHICAGO 9, ILL.

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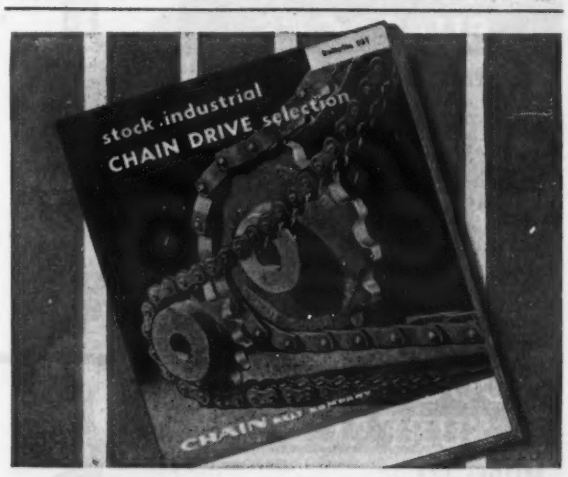

You can select stock chain drives!

You can translate *your* horsepower requirements...*your* shaft sizes and speeds...*your* load classification...*your* space limitations...into the right size and type of drive chain and sprockets with CHAIN Belt's new Bulletin 581. It's simple and fast. You select from easy-to-read tables the exact chain needed for *most economical* service.

Send for Bulletin 581 today. CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

In Canada, Write CHAIN Belt (Canada) Ltd., 1181 Sheppard Ave., Toronto, Ont.

CHAIN BELT

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PICK UP DANGEROUS METAL

from

• Parking lots • Factory floors and aisles • Storage yards • Driveways • Docks • Inter-plant roadways • Railway sidings • Airport runways and aprons

with **DINGS**

Magnetic Sweepers

Here's the easy, economical way to prevent accidents to men and equipment. Pick up foot-entangling or tire-puncturing metal with the Dings non-electric Magnetic Sweeper model that best fits your needs.

Dings Road Sweepers, either trailer-mounted or suspended from any mobile equipment, are lightweight, waterproof, guaranteed permanent. Dings Floor Sweepers, also guaranteed permanent, are newly designed for quick, easy cleaning.

Write for Bulletins 1210-A-4 and B-1302-A today.

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave.
Milwaukee 46, Wisc.

Dings

B-158-1/9

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the NEW **magic marker**® patented

"GIANTS"

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Giant MAGIC MARKER instant-dry, waterproof, permanent marking on any surface or material. Ready to use. Nothing to fill or spill. No loose ink. 12 colors.

ALUMINUM SEAMLESS BODY, 3/8" CUBE FELT NIB. $1.59
REFILLS 89C. REPLACEABLE NIBS, 25C.

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Giant "Opaque" MAGIC MARKER enamel base opaque ink. For marking smooth, non-porous surfaces. Indelible, weatherproof, abrasion-proof. Ball-type valve action. Ready to use. 8 colors plus white.

ALUMINUM SEAMLESS BODY, 3/8" NYLON AND FELT NIB HEAD. $1.89
REFILLS 99c

PAT. PEND.

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Giant "Heavy Opaque" MAGIC MARKER lacquer base, heavy opaque ink. For porous, dirty, abrasive surfaces. Ball-valve action. Unbreakable, refillable squeeze bottle. White, black, yellow.

Pat. Pend. FILLED, READY TO USE. $1.79

TYPE "OO" INKS: 4 OZ. $1.40 8 OZ. $2.50 16 OZ. $4.35

FREE! New descriptive literature on specific marking, stamping, stencilling products now available. Write:

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©1959 SPI DEPT. EQ-4 RICHMOND HILL 18, N. Y.

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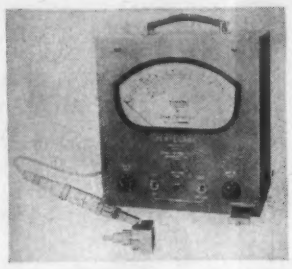
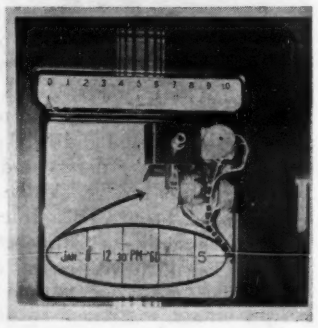
PLATING THICKNESS GAGE
measures from 0.0001 to 0.015 in.



Silver, copper, nickel, chromium, cadmium, zinc, brass, tin, and other plating or coating from 0.0001 to 0.015 in. thick on iron or steel base materials are measured by the Model D-873 Plategage. An inexperienced operator can quickly measure paint thickness, babbit or bronze linings in steel bearings, and copper which has been bonded with steel. Magnetic probe makes precision measurements on flat or irregularly contoured surfaces and large areas. Contours as low as 1/16 in. OD or ½ in. ID are measured by the 9-lb transistorized instrument, for use on line or batteries. With two thickness calibration standards and a probe, it sells for $345. • **Dyna-Empire, Inc.**, 1075 Stewart Ave., Garden City, N. Y.

▲ For more details circle NED-442 D on enclosed inquiry slip ▲

TIME & CODE PRINTER
attaches to strip chart recorders



Identichart RI-5 printing device in kit form is easily installed on all makes of strip chart recorders. It automatically prints date, time to nearest minute, and a remotely selected code number or letter on charts. Its time clock operates continuously on a 60-cycle line and the solenoid printing mechanism operates on any voltage from 24 to 115 v ac-dc. Up to 12 code numbers are selected by a remote switch, stepping relay, or other combination of contacts. Additional manually set code wheels can be added. • **Royson Engineering Co.**, Hatboro, Pa.

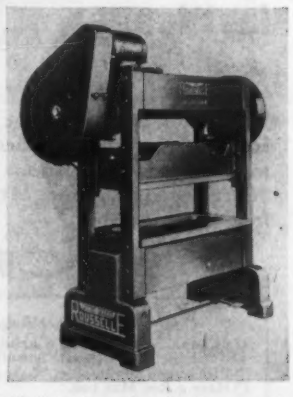
▲ For more details circle NED-443 D on enclosed inquiry slip ▲

20-IN. VACUUM NOZZLE
five models serve various uses

An area of 1000 sq ft can be vacuum cleaned in 7 min with these 20-in. vacuum cleaning nozzles which fit Ace or other tank type cleaners with 1½-in. vacuum hoses. Five aluminum models have brushes for floors where dust and dirt adhere; fiber shoes for cement or abrasive floors; felt shoes for polished floors; metal shoes for concrete floors or severe industrial use; and a squeegee nozzle for liquid pick-up. • **Ace-Sycamore, Inc.**, 448 DeKalb Ave., Sycamore, Ill.

▲ For more details circle NED-444 D on enclosed inquiry slip ▲

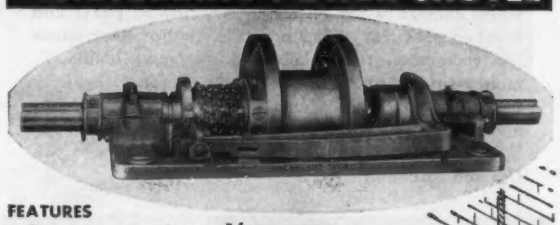
DOUBLE-CRANK PRESSES
handle wide roll and sheet stock



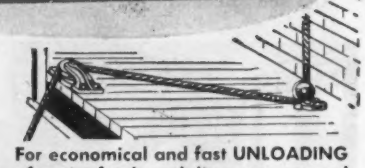
This 40-ton straight-side, double-crank Rousselle press handles wide roll or sheet stock, including plastics, paper, leather, and sheet metal. Rigid, four-corner ram support adapts press to steel rule dies and a variety of multiple punching. Three sizes have bed areas up to 6 ft. Standard die space of 12 in. can be increased up to 24 in. Presses can be equipped with electrically controlled "Econo-Air" friction clutch for rapid, shockless starting and stopping at high speeds. • **Service Machine Co.**, 2310 W. 78th St., Chicago 20, Ill.

▲ For more details circle NED-445 D on enclosed inquiry slip ▲

Webster No. 40 Improved
AUTOMATIC POWER SHOVEL



FEATURES
- One-man operation
- No hazardous counterweights
- Fewer parts
- Less breakage
- Positive action
- Easy control
- Positive safety



For economical and fast UNLOADING of grain, feed, coal, lime, cement and other bulk materials from railroad cars and long truck trailers.

Write for literature

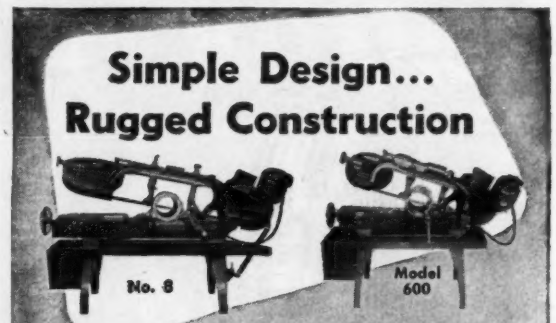
WEBSTER MANUFACTURING, INC.
Dept. NE-40, Tiffin, Ohio
Offices in all principal cities

Materials Handling Systems Since 1876

BELT, APRON and FLIGHT CONVEYORS • CHAIN and ATTACHMENTS • IDLERS • BUCKET ELEVATORS • CAR PULLERS • PILLOW BLOCKS • CLUTCHES • SHEAVES • PULLEYS • ROLLERS • SPROCKET WHEELS

▲ For more details circle NED-446 D on enclosed inquiry slip ▲

Simple Design... Rugged Construction



WELLS HORIZONTAL METAL CUTTING BAND SAWS

The simple design and rugged construction of every "Wellsaw" didn't just happen. We planned it that way! Over 30 years of specialized band saw experience and know-how is your assurance of the quality and service with each machine produced by Wells Manufacturing Corporation.

There is a Wells Saw of the right style, capacity and speed to do a better, more economical job for you. Wells Saws will deliver long, dependable service. Operating and maintenance costs are very low. See your Wells Distributor.

Wells

The Pioneers of Horizontal
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding Street, Three Rivers, Mich.

▲ For more details circle NED-447 D on enclosed inquiry slip ▲

AIR GAGE READINGS RECORDED AUTOMATICALLY

New Sheffield pneumatic gage recorder automatically records size variations during *continuous* or repetitive air gaging. Gives your customers part size certification. Eliminates talley sheets and other less efficient practices. Records deviations from specified part size on 4" wide chart. Full scale range is from ±0.0003" to ±0.04" with back pressure type tooling. Chart travel is continuous or indexing. Chart calibrations are uniformly spaced with 5, 10, 15 or 30 divisions each side of center zero. Controls are virtually tamper-proof. Write Dept. 13 for Bulletin PGR.

The **SHEFFIELD** *Corporation • Dayton 1, Ohio*
A subsidiary of The Bendix Corporation

▲ For more details circle NED-448 D on enclosed inquiry slip ▲

WIRE CLOTH PARTS

- Fast Service
- Long or Short Runs
- Low Cost
- ANY Metal
- ALL Meshes
- ANY Shape

SOLDER, BRAZE, WELD, FOLD CONSTRUCTION

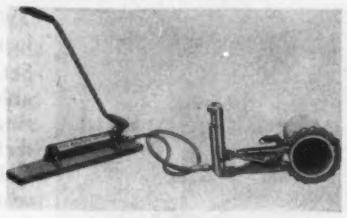
For more information on this NEWARK Service, send for our Fabricated Parts Bulletin.

NEWARK WIRE CLOTH COMPANY

351 Verona Avenue • Newark 4, New Jersey

▲ For more details circle NED-449 D on enclosed inquiry slip ▲

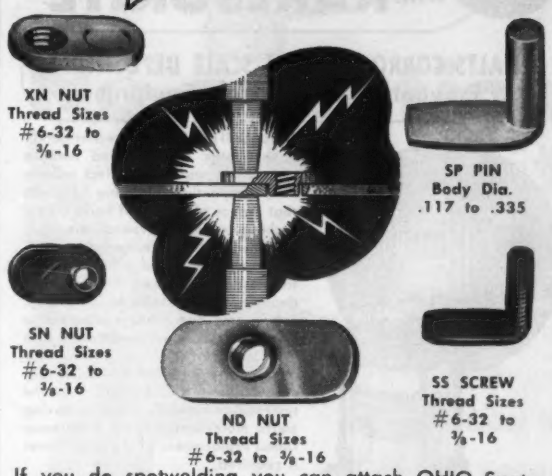
HYDRAULIC PIPE CUTTER
severs cast iron pipe, clay tile



Usable in close quarters and on overhead jobs, the Wheeler Jr. hydraulic pipe cutter is easily and safely operated from a remote position. Hydraulic power easily cuts up to 8-in. standard and extra heavy soil pipe and 2 and 3-in. cast iron water main. Additional cutting chain is available for severing up to 15-in. clay tile. The hydraulic power assembly will convert a Wheeler manual cutter to power operation. • **Wheeler Mfg. Corp.**, Box 688, Ashtabula, Ohio.

▲ For more details circle NED-452 D on enclosed inquiry slip ▲

OHIO SPOT WELDING FASTENERS



If you do spotwelding you can attach OHIO Spot-weld Fasteners at the same time for faster, trouble-free assembly.

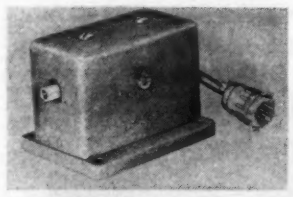
Samples and information available upon request.

The Primary Fastener in Fastener Assemblies

THE OHIO NUT AND BOLT CO.
14 FIRST STREET BEREA, OHIO

▲ For more details circle NED-455 D on enclosed inquiry slip ▲

POSITION TRANSDUCER
for remote detection applications



Static or dynamic mechanical displacement is remotely detected by the DP-33 Position Pickoff, an accurate position-sensitive transducer. A linear variable differential transformer is its basic sensing element. High stepless output, external zero adjustment, and infinite resolution are features. Device measures beam deflection, thickness, strain and elongation, surface quality of materials in motion, and thermal expansion of metals. It weighs 12 oz and operates over a −65 to 220° F range. Special units operate up to 500° F. • **Schaevitz Engineering**, Box 505, Camden 1, N. J.

▲ For more details circle NED-453 D on enclosed inquiry slip ▲

the penetrating force of...

COLD STEAM

CLEANS FASTER, BETTER, CHEAPER

Handle all kinds of cleaning jobs with the greatest of ease with HYDRO-AIR. This gun-type cleaner connects to standard air and hot or cold water supply. Compressed air "breaks" water into minute particles producing a dense penetrating force which blasts heavy dirt or quickly rinses metal sheets and small parts. Operates on 1 H.P. compressor and uses less than 3½ c.f. of air and 3½ gals. of water per minute. Easy to handle — weighs less than 2 lbs. Rubber sleeve protects user's hand when hot water is used.

$11.45

● ***NEW... Siphoning attachment for application of cleaning solvents — under pressure — on parts, machinery or any difficult surfaces for cleaning.***

HYDRO-AIR PRESSURE WASHER

BLASTS STUBBORN DIRT! HARMLESS TO FINEST FINISH!

ORDER THROUGH YOUR SUPPLIER — or write direct. (Inquiries invited from industrial cleaning compounders interested in resale.)

D & M PRODUCTS, INC.

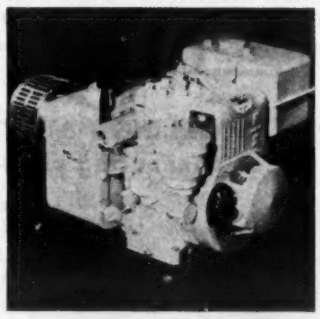
26 N. RAYMOND AVE. • PASADENA, CALIFORNIA

HYDRO-AIR is widely used throughout these industries:

Aviation	Construction	Transportation	Meat Packing
Automotive	Pharmaceutical	Railroads	Baking
Food Processing	Paper	Petroleum	Foundries
Brewing	Ship Building	Mining	Jewelry
Dairy Products	Textile	Metalworking	Leather

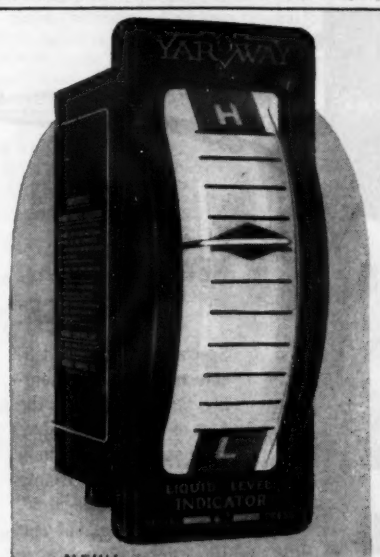
▲ For more details circle NED-450 D on enclosed inquiry slip ▲

SELF-PRIMING PUMPS
have 5000 and 7000 gph capacities



Durability of an iron volute and the light weight of an aluminum body are combined in two self-priming centrifugal pumps. Both are driven by four-cycle gasoline engines and are equipped with automatic recoil starter, oil bath air cleaner, suction strainer, shock-absorbing mounts, and carrying handle. Wear plate and volute are replaceable. The 42-lb, 1½-in. Model 5M has a 3-hp engine and pumps over 5000 gph. Model 7M has 2-in. suction and discharge and pumps over 7000 gph. • **Pacific Mercury**, 13232 Leadwell, North Hollywood, Calif.

▲ For more details circle NED-454 D on enclosed inquiry slip ▲



NEW!
Wide-vision face permits clear view from any point in 180° arc.

YARWAY REMOTE LIQUID LEVEL INDICATOR

boiler levels right-bright-and in sight

Brings boiler water levels and other liquid levels down to convenient eye-height—accurately and brilliantly. Over 12,000 in use. For free Indicator Book, write YARNALL-WARING Co., 131 Mermaid Ave., Philadelphia 18, Pa.

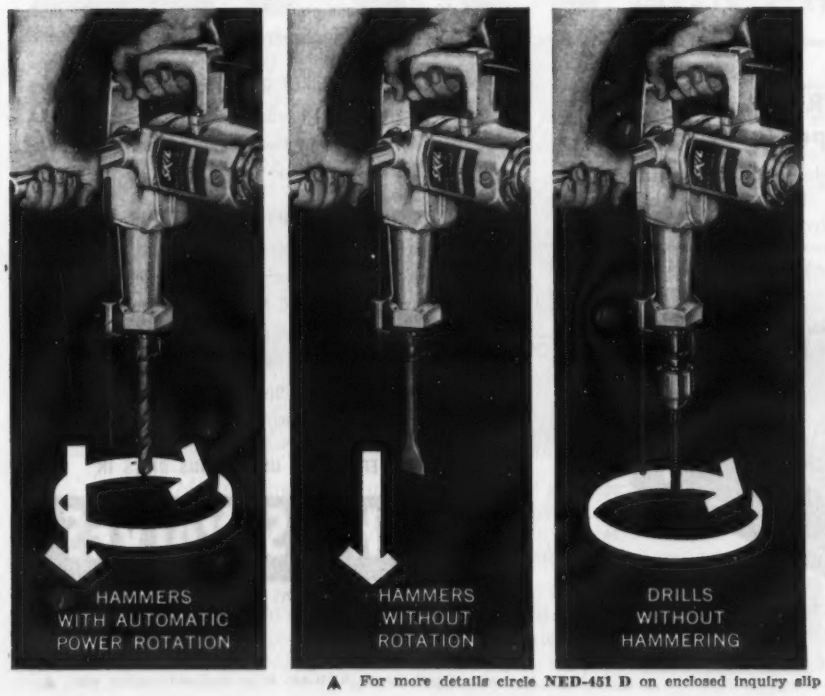
Branches in all principal cities.

go YARWAY with confidence

▲ For more details circle NED-456 D on enclosed inquiry slip ▲

New! Revolutionary Skil Roto-Hammer

With exclusive 3-way action that obsoletes all other electric hammers!



It's actually 3 different tools in one:

Powerful hammer with automatic power rotation that drills holes in masonry up to 65 times faster than by hand . . . up to 5 times faster than ordinary hammers . . . without tiresome rotation of star drills.

Hammer without rotary action for all kinds of hammering jobs, including channeling, routing, chiseling, riveting, demolition work, setting self-drilling anchors.

Drill without hammering action for boring holes in masonry, wood, metal, or any material that can be drilled with standard electric drills.

Costs per hole are lowest of any hammer. Maintenance costs are lowest, too, because of unique "electro-pneumatic" drive.

Ask your Skil distributor for demonstration of Model 726 (½-1 inch) and Model 736 (1-2 inch). Or write for 8-page brochure. Skil Corporation, 5033 Elston Ave., Chicago 30, Illinois. Dept. 119D.

SKIL ... and SKILSAW POWER TOOLS

▲ For more details circle NED-451 D on enclosed inquiry slip ▲

It's so easy!

Get Sparkling Clear, Conditioned Water with KARLSONITE*

HALTS CORROSION and SCALE DEPOSITION
Prevents Rust Stains on Equipment

KARLSONITE phosphate water conditioner holds minerals and metallic elements in water in perfect suspension, preventing clogging deposits that reduce efficiency of boilers, heat exchangers, cooling towers, etc.

Water for human consumption, too, is vastly improved. Crystal-clear, tasteless and non-toxic, it produces no deposits or rust stains in ice cubers, coffee urns and other equipment in most cases . . . when conditioned with KARLSONITE.

An easily installed KARLSON dispenser feeds KARLSONITE into the system automatically. With no moving parts, maintenance is nil. Only occasional replacement of the conditioner is required.

With KARLSONITE, it's so easy to get the *most* and the *best* out of your water system. The cost? Amazingly low. Why not investigate?

Write for full information

STILES-KARLSONITE CORPORATION
1564 Grand Avenue • Waukegan, Illinois
*Reg. U.S. Pat. Off.
WATER CONDITIONING COMPOUNDS AND EQUIPMENT

▲ For more details circle NED-457 D on enclosed inquiry slip ▲

NEW MIDGET CHAIN NOSE!

Specially designed for delicate subminiature assembly, this new plier is the first of its size and kind. It's a precision instrument offering the thinnest nose possible. Available in 4", 4½", and 5" sizes. Call your Utica distributor or write for complete information.

Utica Drop Forge & Tool Division, Kelsey-Hayes Company, Utica 4, N. Y.

tools the experts use!

▲ For more details circle NED-458 D on enclosed inquiry slip ▲

POINT-OF-USE STORAGE
Reduces Parts Loss and Damage

SAVES SPACE and TIME

IN ASSEMBLY PLANTS AND JOB SHOPS low cost Stackbins in Stackracks provide flexible point-of-usage storage to cut costs and increase production.

AVAILABLE IN 8 SIZES, individual Stackbins in Stackracks make components of high usage accessible. Different size units can be interstacked to provide centralized control of related parts. STACKBIN POINT-OF-USAGE STORAGE is easily adapted to changing production requirements. Individual Stackbin in Stackrack units interlock: no tools, fasteners or set-up time required.

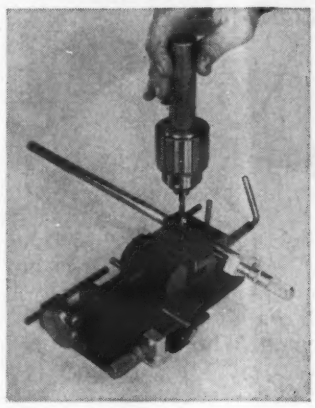
ALL STACKBIN PRODUCTS ARE SOLD DIRECT
WRITE FOR CATALOG 505

STACKBIN CORP. 1081 Main St., Pawtucket, R. I.
Mfgd. and sold in Canada exclusively by Wickware-Stackbin, Ltd., Perth

STACKBIN® SYSTEM
"Stacked and Still Accessible"

▲ For more details circle NED-459 D on enclosed inquiry slip ▲

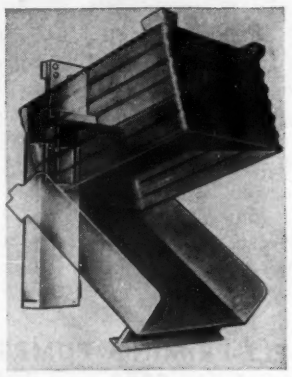
MICRO-POSITIONING VISE
locates work exactly for machining



Twin - micrometer adjustment of the Quick-Set precision vise enables fast, accurate setting of work under drills and reamers. Calibrations are direct reading. Vise can be fastened to a reference base, such as a drill press table. Each micrometer adjustment operates independently. Two stop rods are provided to make possible fast production work. Vise has 2½ x 13-in. capacity, weighs 13 lb and is accurate to ±0.0005 in. hole-to-hole. Price is $93.50. • **Zanger Machine Co.**, 512 Eastern Parkway, Brooklyn 25, N. Y.

▲ For more details circle NED-460 D on enclosed inquiry slip ▲

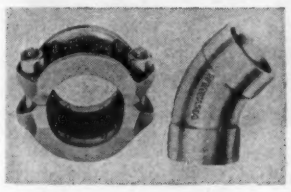
DROP-BOTTOM BOX DUMPER
attachment for all makes of boxes



Any make and model of lift truck can be fitted with this hydraulic attachment which dumps drop-bottom boxes, regardless of make or contents. It consists of a welded body with hardened guide bars and full-floating cylinders. Simple bracket welded to top edge of existing boxes engages a bracket on the dumper. Lift truck raises the box to the desired height for dumping. Forks remain unchanged. Units with 4000, 6000, 8000, and 10,000-lb capacities are offered. • **Little Giant Products, Inc.**, 1530-50 N. Adams St., Peoria, Ill.

▲ For more details circle NED-461 D on enclosed inquiry slip ▲

PIPE COUPLINGS & FITTINGS
for connecting plain-end pipe



Pipe is joined without end preparation using the Plainlock Method for low cost and leak-tight fluid lines. Two-bolt couplings have hardened stainless steel grips that engage pipe ends and lock them together. Triple-Seal molded gaskets of resilient compounds assure leak-tightness and long life. Fittings have minimum friction loss and ample wall thickness for corrosion and abrasion protection. They are available with plain ends, or in combination of plain and grooved, threaded, or flanged ends for interconnection with other piping systems. Maximum gripping power is obtained with Schedule 40 steel pipe. Both couplings and fittings are made in 1, 2, 2½, 3, 4, and 6-in. sizes. • **Victaulic Co. of America**, Box 509, Elizabeth, N. J.

▲ For more details circle NED-462 D on enclosed inquiry slip ▲

HYDRAULIC FLOW CONTROL
3000-psi pressure-compensated type

Usable as meter-in, meter-out, or bleed off types, line of 3000-psi, pressure-compensated, flow control hydraulic valves has flow capacities from 6 gpm in the ¼ to ⅜-in. pipe tap size to 125 gpm in the 1½-in. model. Pump always operates at full power because excess oil is spilled over a relief valve. Features include uniform low flow, Teflon seals, two and three port designs, vernier knob with safety-lock wiring, optional return free-flow check, and choice of four sizes. • **Rivett, Inc.**, Brighton 35, Boston, Mass.

▲ For more details circle NED-463 D on enclosed inquiry slip ▲

brazing washers Edgewound
FROM WIRE STOCK

No die charges
No blanking scrap losses

- No lead time needed for dies or exact strip.
- Use with induction, gas-air, furnace, or other heating methods.
- Available in EASY FLO and SILFOS — Copper, Bronze, and other alloys.
- Diameters up to 4" I.D., wire thicknesses from .010 upward.

Write for 16 page booklet on better brazing.

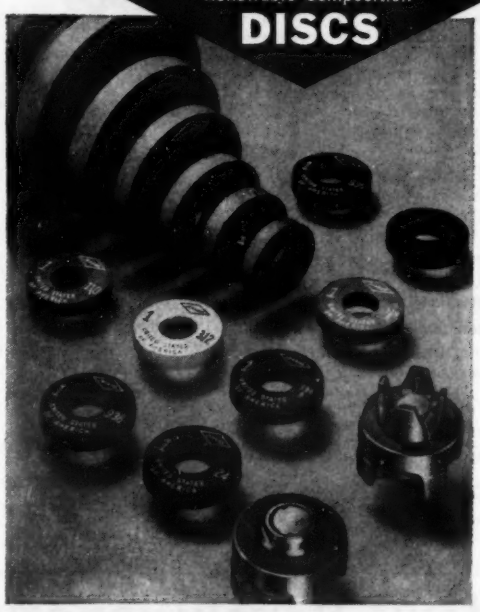
See our catalog in Sweet's Product Design File 7/LU

LUCAS-MILHAUPT Engineering Co.
5070 South Lake Drive, Cudahy, Wisconsin

▲ For more details circle NED-464 D on enclosed inquiry slip ▲

PROTECT YOUR VALVE INVESTMENT

Specify and be sure you get
JENKINS
Renewable Composition
DISCS



MADE BY THE ORIGINATORS OF RENEWABLE DISC VALVES

Jenkins Bros. has remained the leader in composition disc development and production since 1864, when the first renewable disc valve was introduced.

THE ONLY MANUFACTURER OF BOTH VALVES AND DISCS

Jenkins Bros. devotes continuous laboratory and field research to disc improvement through use of new compounds, and new production techniques.

WRITE FOR NEW GUIDE FOR DISC SELECTION

Describes all Jenkins Discs, and their applications for steam, hot and cold water, air, gas, oil, gasoline . . . including the new TEFLON® DISC for lasting, dependable control of oxygen and other gases, solvents, acids, alkalies, and other chemicals,—and for liquid food and similar services.

Ask your Jenkins Valve Distributor for Disc Folder Form 203, or write: Jenkins Bros., 100 Park Ave., New York 17.

FOR HIGHEST EFFICIENCY USE JENKINS DISCS IN

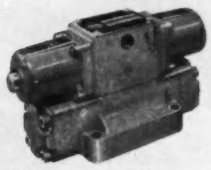
JENKINS VALVES

LOOK FOR THE JENKINS DIAMOND TRADE JENKINS MARK ®

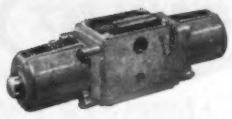
Jenkins Bros

▲ For more details circle NED-465 D on enclosed inquiry slip ▲

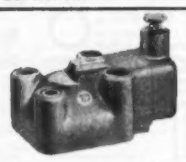
TOP QUALITY VALVES... COMPETITIVELY PRICED



3000 psi, 20 gpm, 4-Way Valves ¾" Pilot Operated, Solenoid Controlled



3000 psi, 6 gpm, 4-Way Valves ⅛" Solenoid Controlled



⅜", ¾" and 1¼" H-P-M Relief Valves

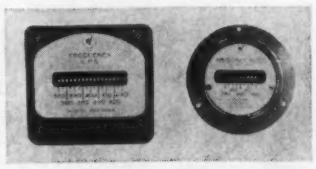
That's right. New, H-P-M 4-way valves offer oil immersed solenoid control; built for 20 to 30 times life expectancy you've known with air gap types. And the price is right. New relief valves give close control of cracking and override pressures; assure long life, free from trouble. Send today for performance chart — actual tests.

HPM H51

THE HYDRAULIC PRESS MFG. COMPANY
A Division of Koehring Company, Mount Gilead, Ohio, U.S.A.

▲ For more details circle NED-466 D on enclosed inquiry slip ▲

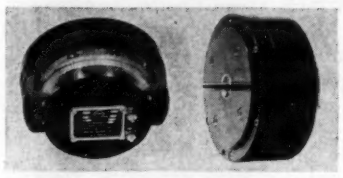
FREQUENCY METERS
modular vibrating-reed type units



Broad selections of frequency, voltage, and resolution are afforded by Series M vibrating-reed frequency meters which have modular construction for rapid assembly and are flush panel mounted. Standard frequencies of 50, 60, and 400 cps are offered, although any frequency from 25 to 2500 cps can be furnished on order. Each reed is gold plated and hand calibrated to within ±0.3 per cent. For any center frequency, 9-reed and 17-reed models are standard. Units can be furnished with any number of reeds from 1 to 72, with linear or nonlinear frequency spacing. Input ratings of 30, 115, 230, and 480 v rms are standard, with 30 to 100-v ratings (single or multiple range) on special order. • **Winslow Co.**, 701 Lehigh Ave., Union, N. J.

▲ For more details circle NED-469 D on enclosed inquiry slip ▲

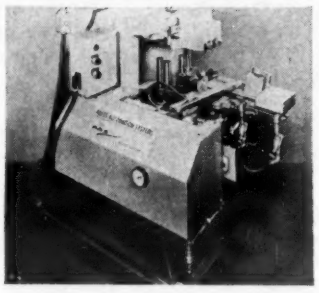
PRINTED CIRCUIT MOTOR
for servo and instrument use



Flat printed circuit is incorporated in this pancake-shaped electric motor instead of the conventional wire - wound armature. Usable for servo, instrument, control, and electronic equipment, the motor has a lightweight armature which attains full speed in a few thousandths of a second. Smooth torque at low speeds, coupled with low armature inertia, allow use for direct drive in servos without gear trains. Two available models measure 4¼ in. diameter by 2¼ in. long and 5⅝ x 3 in. • **Photocircuits Corp.**, 31 Sea Cliff Ave., Glen Cove, N. Y.

▲ For more details circle NED-470 D on enclosed inquiry slip ▲

OBI PRESS FEEDER UNIT
feeds 40 to 60 pieces per minute



Open back inclinable presses can be automated by installing the Pas-It packaged, plug-in feeder which will feed parts into dies at rates from 40 to 60 per minute. The air-powered unit mounts on an adapter plate bolted to side of press and transfers parts to die from an operator-fed, preload station. Part is picked up with vacuum lift, electromagnets, or gripper fingers. Safety interlock system and press cycling limit switches are standard. • **Press Automation Systems, Inc.**, 25418 Ryan Rd., Warren, Mich.

▲ For more details circle NED-471 D on enclosed inquiry slip ▲

design, purchasing, production men . . .

here's why you're right with MOORE SET SCREWS

Headless Slotted

Square Head

Socket Head

Design — there's a Moore Set Screw exactly right to meet your specs. On new developments or on hard-to-solve problems we have experienced men to supply the answers.

Purchasing — you can depend on us, without question, to meet your schedules. Your reputation is backed up by our reputation of 80 years of dependable service.

Production — our inspection guarantees conformity and uniformity. Your assembly lines run smoothly and quality control is simplified.

Moore Set Screws simplify design, purchasing, production. Send for detailed price catalog.

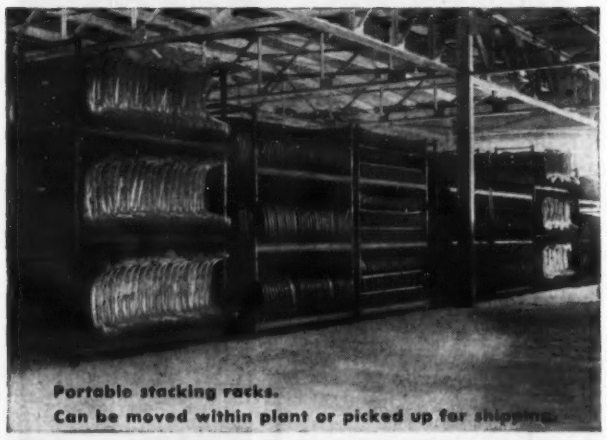
MOORE SET SCREWS

George W. Moore, Inc.
since 1880
94 Beaver St., Waltham 54, Mass.

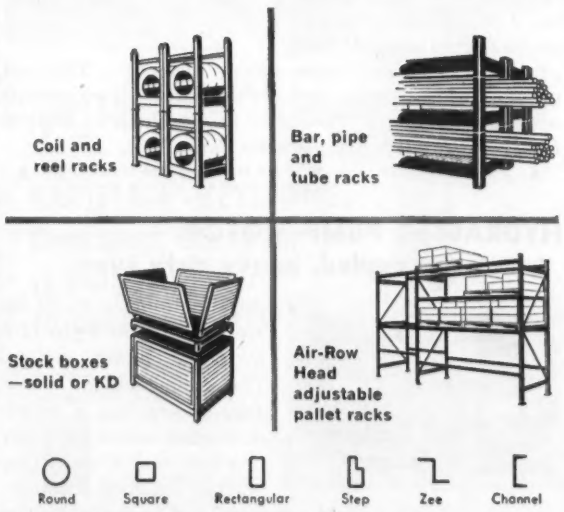
▲ For more details circle NED-467 D on enclosed inquiry slip ▲

EMI

RACKS FOR ANY STORAGE OR SHIPPING PROBLEM



Portable stacking racks.
Can be moved within plant or picked up for shipping.



EMI has the most complete range of storage and material handling racks in the industry. Shown here are examples. If you have a special problem, we will design racks to your exact specifications.

METAL WORKING FACILITIES—EMI offers complete metal working facilities including tubular, structural and special shapes.

YOU CAN STACK OR SHIP ANYTHING ON EMI RACKS

Write for our complete catalog!

EQUIPMENT MFG. INC.
21550 HOOVER ROAD • DETROIT 5, MICHIGAN

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No question about it

. . . LINK-BELT has the right elevator bucket for the widest variety of materials and capacities

Long-lasting elevating efficiency is a certainty with Link-Belt cast buckets. Their smooth surfaces, well-rounded corners and proper proportioning assure quick filling . . . fast, clean discharge. And they're reinforced at points of greatest stress to resist wear and distortion. These exceptionally durable buckets are available in malleable iron or Promal. For complete facts and specifications write for Book 1050.

STYLE AA — Recommended for heavy, gritty materials such as sand, gravel, stone. Has a reinforced lip for digging and added wear life.

STYLE B—Used on inclined elevators handling coarse materials. Low front design assures clean discharge at relatively low speeds.

STYLE C — Designed for easy, efficient handling of finely pulverized or wet materials that have a tendency to stick or pack.

STYLE D — This continuous type bucket provides clean, gentle handling of coal, sand, gravel, crushed stone and other dry materials.

STYLE SC — Ideal for elevating either dry or relatively wet materials. Can handle greater capacities than styles A or C.

MALLEABLE CAST AND STEEL FABRICATED

All Link-Belt steel buckets are of welded construction . . . all are formed of heavy-gauge steel. HS type is designed for high-speed and maximum capacity. Salem buckets are shaped for proper filling and free discharge of granular, powdered, free-flowing materials. Continuous buckets offer clean discharge at low speeds of crushed stone, ore, coal and other bulky, gritty materials.

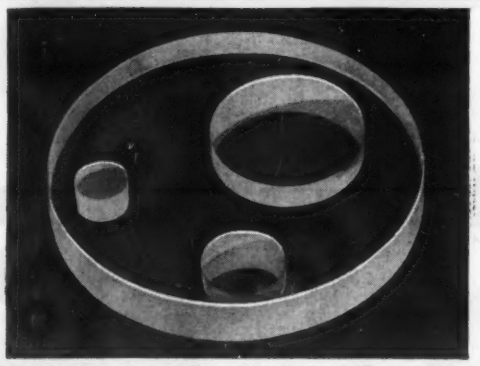
For full information, contact your nearest Link-Belt office or authorized stock-carrying distributor. Write for Book 1050.

LINK-BELT

ELEVATOR BUCKETS

LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-472 D on enclosed inquiry slip ▲



NOW! Swift Sight Glasses
With Holes Up To 2" In Diameter

You can now order Swift Sight Glasses with holes from ⅛" to 2" in diameter . . . in nine thicknesses (from ⅛" to 1¼") . . . **in any shape** . . . and in sizes up to 24" by 60" (limited by size of the Pyrex glass). Standard shapes always available for immediate shipment.*

Swift Glasses are precision-ground from Pyrex Polished Plate Glass . . . they won't cloud or pit . . . resist all chemicals but HF and caustic soda solutions.

***A point to remember:** you can take care of **all** your sight glass needs **at one time,** with a single order to Swift.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

▲ For more details circle **NED-473 D** on enclosed inquiry slip ▲

PULL
LIFT
LOWER
WITH THE CADILLAC
WINCH HOIST

This lever-actuated winch hoist has been use-tested since 1952. It's SAFE! It withstands 50% overload! *Every* hoist is pre-tested to full capacity before it leaves the factory. It is easy to handle because it is made of light weight aluminum alloy with stainless steel shafts and springs. Aircraft cable assembly is replaceable without dismantling. Snap-on reversible handle speeds operation. Distributors in all major cities. Capacities 1000 lbs. to 4000 lbs. Price is $29.50 up.

Full year guarantee against defective workmanship and materials.

ALUMINUM PRODUCTS, INC.
698 S.W. 2nd AVE. ESTABLISHED 1943 FT. LAUDERDALE, FLORIDA

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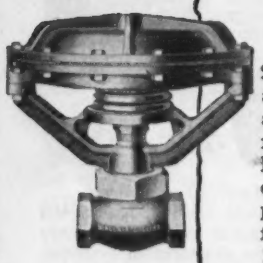
control low and medium pressure raw water (hot or cold), steam, oil, air, gas or vacuum

SINCLAIR-COLLINS

DIAPHRAGM OPERATED
VALVES



2-way direct and reverse acting, 3-way • air operated • automated or manual control • stainless steel trim • bronze or ductile iron bodies • pressures from near perfect vacuum to 350 psi • 1/16 to 3 in. NPT.

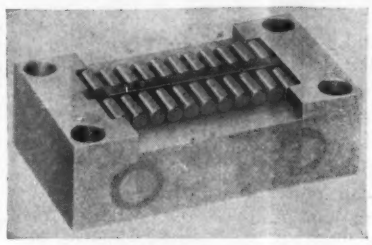
For more information, write for Bulletin SC-59. Address The Sinclair-Collins Valve Company, Akron 9, Ohio, Dept. NED-460.

8119

The SINCLAIR-COLLINS VALVE Co.
AKRON, OHIO
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)
Other INDUSTRIAL DIVISIONS of IBEC: The Bellows Co., Akron, Ohio Valvair, Akron, Ohio • V. D. Anderson Co., Cleveland, Ohio

▲ For more details circle **NED-475 D** on enclosed inquiry slip ▲

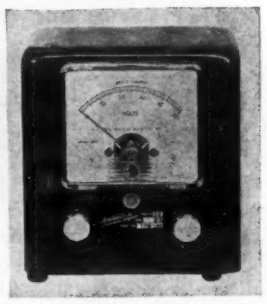
ROLLER WAY CARTRIDGE
four standard sizes offered



Break-away and drag friction of machine tool heads and tables is reduced by use of this high static and dynamic load capacity roller way cartridge. Small rollers distribute load. Press fitted manganese bronze end caps assure permanent horizontal and vertical alignment of the assembly which has no screws or dirt-catching recesses. Finished cartridges are ground square on all surfaces. • **Beaver Precision Products, Inc.,** 651 Rochester Rd., Clawson, Mich.

▲ For more details circle **NED-476 D** on enclosed inquiry slip ▲

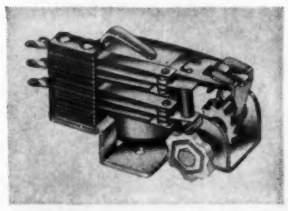
TRANSISTORIZED POWER SUPPLY
small unit has 0-50 v dc output



This laboratory type transistorized power supply measuring 5 x 5 x 6 in. is rated 95 to 135 v ac single-phase input with output of 0 to ½-amp, 0 to 50 v dc, continuously variable. It is adjustable from a 1-v increase to a 1-v decrease, no load to full load. After 15-sec stabilization period, output will not drift more than 0.07 v about the desired setting. Maximum ripple is 4 mv rms. • **Autotronics Inc.,** Dept. 23, Box 208, Florissant, Mo.

▲ For more details circle **NED-477 D** on enclosed inquiry slip ▲

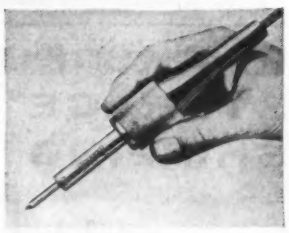
IMPULSE RELAY
rated 1500 w noninductive



Trouble-free operation for over 1 million steps is assured by Series 670 impulse relay. Coil voltages range to 230 v ac or 110 v dc. Each momentary impulse (up to 10 steps per second) causes relay to reverse its cam actuated contacts. The double-pole double-throw contacts are rated 1500 w noninductive, or up to 20 amp on 115 v, 60 cycles. Applications include on-off control of lights, motors, appliances, and speakers. • **Guardian Electric Mfg. Co.,** 1621 W. Walnut St., Chicago 12, Ill.

▲ For more details circle **NED-478 D** on enclosed inquiry slip ▲

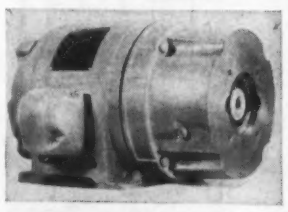
SOLDERING PENCIL
60-w unit weighs only 2 oz



Stainless steel alloy element housing and a ventilated handle for cool operation are built into this soldering pencil with long-life ¼-in. coated copper tip. The 60-w tool weighs but 2 oz and is suited for constant-duty use. It has a nickel-chromium, mica-wound element. Tip and element are separate replaceable parts. Two models operate on 110 and 220-v ac or dc. • **Hexacon Electric Co.,** 145 W. Clay Ave., Roselle Park, N. J.

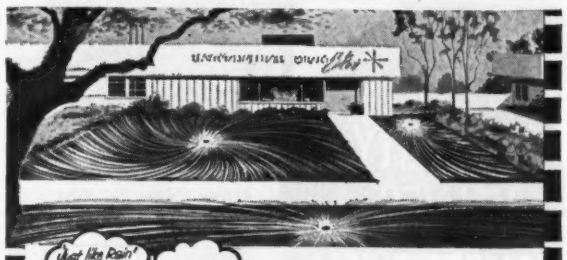
▲ For more details circle **NED-479 D** on enclosed inquiry slip ▲

HYDRAULIC PUMP MOTOR
close coupled, heavy duty type



Ratings from ¾ to 50 hp are available in Type H-7 hydraulic pump motors. The close-coupled, heavy duty motor has a corrosion resistant cast iron frame and a mounting bracket designed to eliminate mounting base and adaptors, and to minimize the over-all length of motor and pump. Splined coupling allows direct pump connection. Single and double end models fit all standard hydraulic pumps. • **U. S. Electrical Motors Inc.,** Box 2058, Terminal Annex, Los Angeles 54, Calif.

▲ For more details circle **NED-480 D** on enclosed inquiry slip ▲



Just like Rain!
RAIN JET® SPRINKLERS

COMPLETE SYSTEM FOR 50% LESS!

• Averages 3¢ a sq. ft. (Conventional system is 6¢ to 10¢.) • Three Rain Jets outperform 20 ordinary heads, install 75% faster! • Finest quality brass. Fully guaranteed. Over 1 million in use!

New! Rain Jet flexible polyethylene pipe. Made of DuPont Alathon Super 25—the finest quality obtainable. **New! Rain Jet quick-attach fittings.** No clamps, cement, or threading. Full flow. Leak-proof. No wrench needed ...hand-tightened. Planning service available.

Write for "How to Install" Brochure.

RAIN JET CORP., 301 SO. FLOWER ST., BURBANK, CALIF.
ALSO MAKERS OF RAIN JET ROTARY SHOWER HEAD

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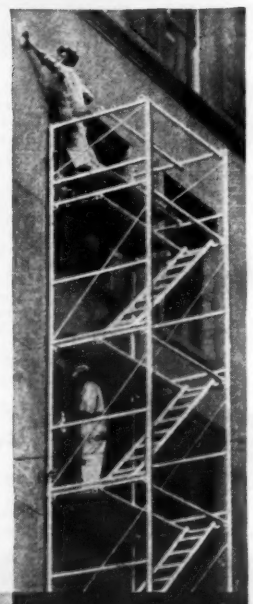
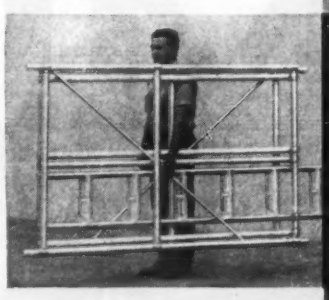
LIGHTWEIGHT STRENGTH

scaffolds made of Reynolds Aluminum

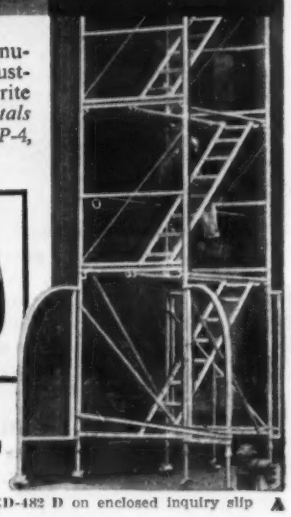


- **size-for-size, aluminum weighs ⅓ as much as steel!**
- **pound-for-pound, aluminum is *stronger* than steel!**
- **aluminum never, ever rusts... resists corrosion!**

For scaffolds that are easy to erect and take down...that are safe, extra-strong and maintenance-free, choose an all aluminum scaffold.



Portable Aluminum Scaffold by Up-Right Scaffolds, Berkeley, California



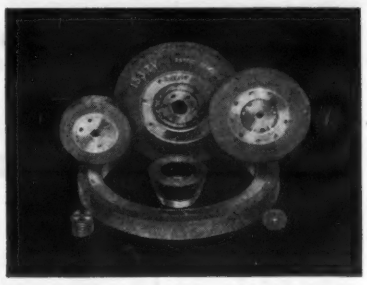
For names of leading manufacturers of lightweight, rust-free aluminum scaffolds, write direct to the *Reynolds Metals Company, Box 2346- NP-4, Richmond 18, Virginia.*

The Finest Products Made with Aluminum are made with REYNOLDS ALUMINUM

Watch Reynolds TV shows—"ADVENTURES IN PARADISE", "BOURBON STREET BEAT" and "ALL STAR GOLF"—ABC-TV

▲ For more details circle **NED-482 D** on enclosed inquiry slip ▲

NEW IDEA IN POWER BRUSHES!



HOW OSBORN TY® BRUSHES

can cut your high finishing costs

For jobs *beyond the reach* of standard wire power brushes—Osborn TY® Tool Brushes are designed to work where abrasive stones or belts, rotary files or tumbling and shot blasting equipment have been used. And TY® Brushes do many jobs *better...faster...at far less cost.*

Production-proved TY Brushes give you maximum work efficiency with minimum brushing pressure ...greater brushing action strength ...positive control over area of brush contact . . . . uniform work finish . . . and extra-long brush life.

Write for full details. *The Osborn Manufacturing Company, Dept. N-16, Cleveland 14, Ohio.*

TY® BRUSH APPLICATIONS
- Wire insulation stripping
- De-burring and blending sharp edges
- Precision surface finishing
- Removing flash
- Roughening materials for bond
- Removing surface scale and oxides

FREE BOOKLET—Write for your copy of "Osborn TY® Tools"—includes complete, illustrated data on applications and specifications covering many of your production jobs.

Osborn Brushes

METAL FINISHING MACHINES . . . AND FINISHING METHODS
POWER, PAINT AND MAINTENANCE BRUSHES • FOUNDRY PRODUCTION MACHINERY

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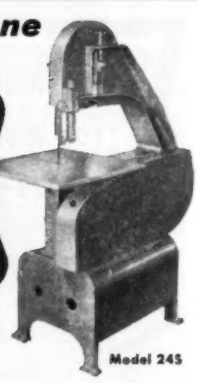
Favorite with Everyone in the Shop!

LOCKFORMER BAND SAW



Model 24S

Pays for itself on the first few jobs
Cuts almost everything, including stainless
Compact, Rugged, Fast, for Continuous Heavy-Duty Cutting

One of the most versatile pieces of equipment you can buy! The Lockformer Band Saw cuts forgings, bars, stacked bronze, brass, copper, aluminum and steel sheets, plates, stainless, wood and plastics. Adjustable 100, 600 and 3000 fpm. blade speeds assure high speed, accurate cutting on any job. V-Belt drive with sheaves eliminates power-robbing speed reducers . . . equals or surpasses production of costlier saws with ratings to 1½ hp. Three-wheel Model 24S has full 24" throat; Model 14SM has two-wheel design with 13½" throat for smaller jobs. Both models are simple, rugged, compact, with friction-free, slip-proof final chain drive. Both have Neoprene seals, life-time lubrication. Cemented carbide guides give perfect blade control.

ALL THIS FOR ONLY $695.00 (MODEL 24S) OR $445.00 (MODEL 14SM)*

**Prices subject to change without notice.*

WRITE FOR LATEST BULLETIN TODAY!

manufactured by

THE LOCKFORMER CO.
4615 West Roosevelt Rd., Dept. N, Chicago 50, Ill.
In Canada: Brown Boggs Foundry & Machine Co., Ltd., Hamilton, Ontario

LOCKFORMER
TIME SAVING, MONEY MAKING EQUIPMENT

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Rapistan

REMOVES the KING-PIN
To give better load distribution

NEW!
3100 Series gives you all these benefits

Longer Life—new design already has demonstrated notable performance superiority over other single ball race casters.
Easier Swiveling—no binding . . . no metal-to-metal friction, because there is NO king pin!
Better Load Distribution—more dependable service, because the hardened swivel bearing raceway supports the load. Resists ball indentation.
Simplifies Your Caster Problems—serves scores of general duty applications up to 500 lbs. capacity. Available with six wheel sizes ranging from 2½" to 6" diameter.

Write for 3100 Series Bulletin

Rapistan conveying equipment
The RAPIDS-STANDARD Co., Inc.
Rapistan Bldg.
763 Grand Rapids 2, Michigan

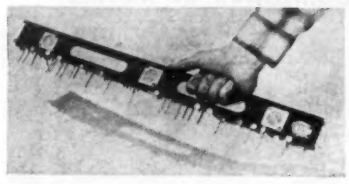
▲ For more details circle **NED-485 D** on enclosed inquiry slip ▲

PAINT HEATER
for small spraying requirements

Weighing only 10 oz more than a conventional cup, the Beck Quart Cup Heater easily and safely applies paints by the hot spray technique. Made of welded aluminum, it has continuous thermostatic control for correct temperature and viscosity. Temperature setting is 150° F, but special settings are offered. A fusible safety link protects the cup from overheating of the 50 sq in., 250 w Nichrome wire heating element. An outside pilot light signals when paint is at the correct heat for spraying. • **Dualheet, Inc.**, 3350 W. 137th St., Cleveland 11, Ohio.

▲ For more details circle **NED-486 D** on enclosed inquiry slip ▲

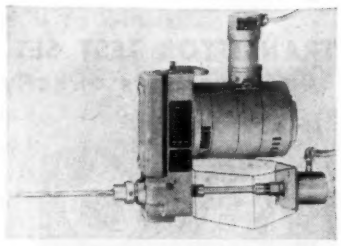
MAGNETIC LEVEL
frees user's hands during use



Self - aligning magnetic level cannot loosen when used in electrical, plumbing, structural steel, and sheet metal work. By clinging to iron or steel surfaces magnetically, it frees the worker's hands for use of tools. The 12, 18, and 24-in. models have two level, two plumb, and two 45-degree vials. They sell for $5, $6, and $7, respectively. The 48-in. size with two level and four plumb vials sells for $12.50. • **Empire Level Mfg. Co.**, 10930 W. Potter Rd., Milwaukee 13, Wis.

▲ For more details circle **NED-487 D** on enclosed inquiry slip ▲

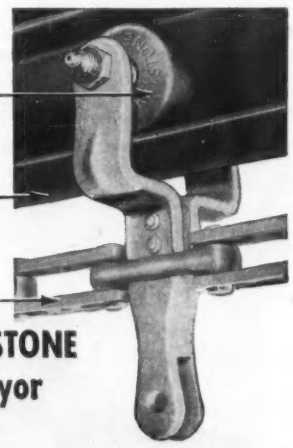
GUN DRILLER
high speed unit for turret lathes



Speeds of 765, 1150, 1405, and 2110 rpm on the Model 3-203 gun driller adapt it for accurate, high speed, production drilling, on conventional turret lathes. It installs on ram or saddle type turrets, has a ¾-in. bore spindle, and accommodates 3/16 to ⅝-in. diameter gun drills. Rigid mounting assures accuracy, even under the shock of rapid indexing. Overhang of only 6½ in. leaves most of the working space accessible. A swivel electrical connector prevents tangled lines. A 300 to 400-psi or 500 to 600-psi coolant stream washes chips out through the single straight flute of the gun drill. • **Ward-Riddle Co.**, 241 Myrtle St., Ravenna, Ohio.

▲ For more details circle **NED-488 D** on enclosed inquiry slip ▲

STRONGER TROLLEY AND WHEEL
STRONGER TRACK
STRONGER CHAIN



RAPISTAN®-KEYSTONE Overhead Conveyor is built stronger to perform better

Cut your new overhead conveyor installation costs, reduce your maintenance and operation costs with R-K overhead conveyor. Patented R-K chain has 10-to-1 safety factor. Rugged trolleys handle loads up to 135 lbs. each. Economical 228 systems handle any light to medium duty jobs. Write today for Bulletin R-K 59 showing many examples.

Rapistan-KEYSTONE, INC.
752 Rapistan Building, Grand Rapids 2, Michigan

▲ For more details circle **NED-489 D** on enclosed inquiry slip ▲

...don't use makeshift dogs
BUY RED-E

5 TYPES TO CHOOSE FROM

GRINDER WORK HOLDING DRIVERS

GUARANTEE QUICK CHANGE-OVERS, POSITIVE GRIP, UNMARRED WORK.

- Steel for extra strength.
- Balanced to prevent chatter.
- Finger tip control on cam action—self-locking.
- Quick adjustments for workpiece dia.

When ordering, please specify Steel or Brass Cams or Screws on Cam Action type.

Ask your distributor, or write for prices and catalog.

CAM ACTION — Steel or brass cams & screws. Cap. 3/16" to 4".
REVERSIBLE — Forged steel. 2 jaw sizes on ea. Replaceable brass tips and plates. Cap. ¼" to 6".
UNIVERSAL — For plain or universals. Replaceable brass plates. Cap. ¼" to 2½".
CUTTER GRINDER — Permits close face plate work. Cap. ⅛" to 2½".
STRAIGHT TAIL — Replaceable brass plates and tips. Cap. ¼" to 6".

IMMEDIATE DELIVERY

CENTER and DOG Specialists Since 1908

RED-E TOOLS
READY TOOL COMPANY
184 Garfield Ave., Stratford, Conn.

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Hobbs DUAL CIRCUIT PRESSURE SWITCHES

Add a NEW DIMENSION to Pressure Activation!

DOUBLE DUTY! Disconnects one electrical circuit while placing the other in operation. Industry-approved for a wide range of applications in dual circuit activation of various types of instruments, warning signals, safety devices, fuel pumps — in many other ways for making and breaking circuits. Ideal for locking out a starting motor while the engine is running. Can be used with oil or air . . . or with standpipe, almost any liquid or gas.

- Non-ferrous pressure chamber
- Alloy contacts
- Phosphor-bronze diaphragm
- Preset at factory

Available in pound setting specifications in both circuits within ranges of 3-6, 7-14 and 15-60 psi. Compact — only 1-11/16" diameter. Pressure assembled and pretested at 150 psi. Designed for use on direct current.

A COMPLETE LINE OF PRESSURE SWITCHES

Also available — a wide selection of single circuit pressure switches. Built by the manufacturers of Hobbs Running Time Meters and Shock-Mounted Head Lights. Distributors in principal cities . . . WRITE FOR CATALOG PS605.

Symbol of SW Excellence
John W. Hobbs Corporation
A DIVISION OF STEWART-WARNER CORPORATION
2076 YALE BLVD., SPRINGFIELD, ILLINOIS

▲ For more details circle **NED-491 D** on enclosed inquiry slip ▲

FASTER HANDLING for all small parts

Rapistan® PRESS-VEYORS

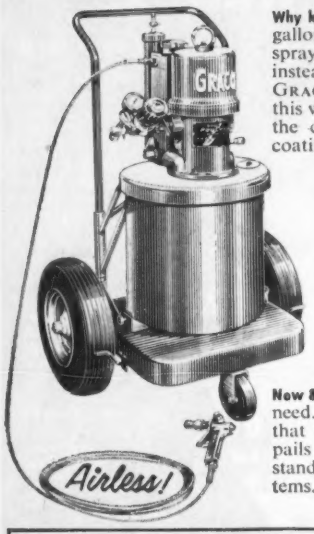
Call on Rapistan for the most efficient equipment to handle any type of mass-produced machine parts, forgings, stampings, light or heavy, any shape, any size, any temperature. Press-Veyors work at steep inclines in close quarters, easily portable, thoroughly dependable. Wide range of Press-Veyor sizes and belt materials. Ideal for press room work and many special problem applications. Magnetic models also available.

Write for illustrated reports of tough handling jobs solved by Rapistan Press-Veyors.

Rapistan conveying equipment
The RAPIDS-STANDARD CO., Inc.
742 Rapistan Building, Grand Rapids 2, Michigan

▲ For more details circle **NED-492 D** on enclosed inquiry slip ▲

How *Airless* Graco Hydra-Spray helps you stop wasting paint!



Why keep wasting 3 out of every 10 gallons of paint you purchase by spraying it into the atmosphere instead of onto the work? *Airless* GRACO Hydra-Spray eliminates this waste of costly paint . . . cuts the cost of applying protective coatings by 30-70%!

Amazing what it can do!

- Creates a fine spray with high fluid pressure instead of with atomizing air.
- Eliminates virtually all overspray and bounce back. Requires less masking, reduces clean-up.
- Gives better coverage, applies heavier film per pass of gun.
- Simplifies equipment needs.

Now 8 standard models to meet every need. Portable and stationary units that pump direct from 5-10 gal. pails or 55-gal. drums, plus sealed standpipe unit for circulating systems. *Get details today!*

For nearest GRACO Supplier — SEE the telephone directory YELLOW PAGES — Look under "SPRAYING EQUIPMENT"

GRACO
ENGINEERS AND MANUFACTURERS
GRAY COMPANY, INC.
47 Graco Square
Minneapolis 13, Minnesota

Factory Branches
New York, N. Y.
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San Francisco, Cal.

Sales Office
Toronto

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NOW...low-cost AUTOMATION!

BUCKEYE DRILLING, TAPPING and FASTENING TOOLS

Cut production costs by employing the features of dependable, air-operated Buckeye Automation Tools:
- Small offset, as close as 1¾" center distance
- Models from 650 to 22,000 RPM
- Adjustable stroke 0 to 2" with micrometer accuracy
- Adjustable feed rate
- One type of tool features total stroke of 2", of which 1" may be fully hydraulically controlled, preventing break-through damage to material and to sensitive cutting tools . . . also incorporates adjustable rapid approach for minimum cycling time.
- Tool accessories provide signals to control mechanisms which will automatically shut tool off . . . actuate other tools for subsequent operations . . . or automatically position the next part.
- Buckeye engineers will work with you in applying these tools to fit your requirements for drilling, tapping, fastening, grinding, reaming, counterboring and wire brushing.

write today for literature, tracing templates and prices

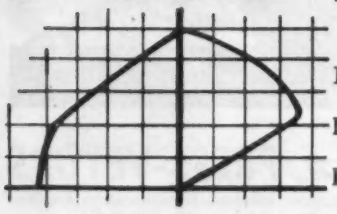
Buckeye Tools CORPORATION
P.O. BOX 966, DAYTON 1, OHIO
Pioneering Power Tools for Industry Since 1920

▲ For more details circle **NED-494 D** on enclosed inquiry slip ▲

Newest Addition to **STEWARD'S MAGNET FAMILY**

ORIENTED F-500

CERAMIC PERMANENT MAGNET



BH=3.5 x 10^6 G.Oe
Hc=2000 Oe
Br=3900 G

High Energy Product For:

APPLICATIONS: • LOUDSPEAKER MAGNETS • MAGNETIC SEPARATORS AND OTHERS REQUIRING HIGH BH PRODUCT AND COERCIVITY.

Look to D. M. Steward Manufacturing Company for all of your Ceramic Magnet requirements.

Write for F-500 brochure to:

D. M. STEWARD MFG. CO.
3620 JERROME AVE. • CHATTANOOGA, TENN.

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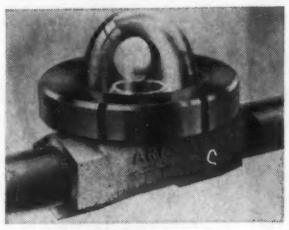
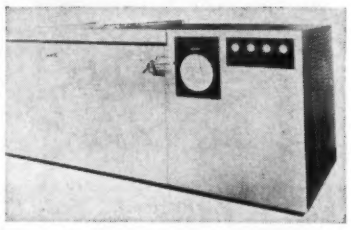
LOW-FLOW INDICATOR
ball type for gas and liquid flows



Clearly visible from a distance, even in bad light, the ball of the Arkon flow indicator "dances" in the toughened glass dome during periods of flow, but drops out of sight when the flow stops. Flows as low as 0.075 gpm (water) and ½ cfm (air or gas) are indicated. Device is usable on air, steam, water, and oil purge lines to instruments and mechanical seals; cooling water to compressors, condensers, and other equipment; and lubricating oil to bearings. The ½-in. pipe size, 100-psi indicator has a diecast bronze body and a nylon or Teflon ball. • **McIntosh Equipment Corp.**, Walker, Crosweller Div., 15 Park Row, New York 38, N. Y.

▲ For more details circle **NED-496 D** on enclosed inquiry slip ▲

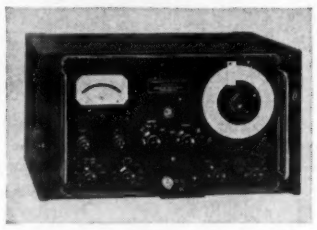
ENVIROMENTAL CHAMBER
for fast stabilization of metals



Temperature range of ambient to −140° F suits the Model WT-54-125 low temperature environmental chamber for fast processing and stabilizing of AM-350 stainless steel, tatnoll, molybdenum, titanium, tantalum, and other metal alloys. It lowers the temperature of 300 lb of steel from 80 to −125° F in 60 min. Inside dimensions are 72 x 36 x 36 in. Interior is 16-gage stainless steel, with bottom reinforced to hold 1000 lb per square foot. A 12-in. recorder-controller is built into the self-contained unit which uses air circulation for zero stratification. Operation is on 220 or 440 v, 60 cycles, three-phase ac. • **Webber Mfg. Co.**, Box 217, Indianapolis 6, Ind.

▲ For more details circle **NED-497 D** on enclosed inquiry slip ▲

TRANSISTOR TEST SET
parameters directly read on dial

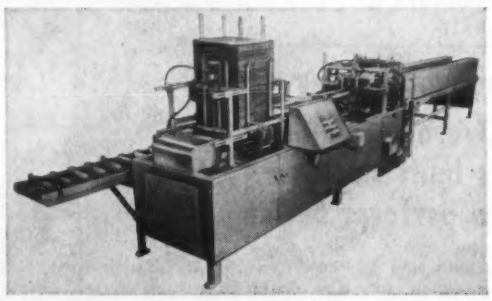


Precise measurement of basic transistor parameters (alpha, beta, and input resistance) over an extended range of operating conditions is function of the Type 275-A transistor test set. Characteristics of diodes and other semiconductor devices can also be measured. Direct readings are presented on a large dial without interpolation. Two built-in, fully regulated, low ripple power supplies furnish variable emitter current and collector voltage. Tester reads alpha to three significant figures from 0 to 0.9 to form figures from 0.9 to 1.0. It handles 5-amp emitter current and checks both npn and pnp transistors. • **Boonton Radio Corp.**, Boonton, N. J.

▲ For more details circle **NED-498 D** on enclosed inquiry slip ▲

AUTOMATIC CASING EQUIPMENT
erects, loads, seals 25 per minute

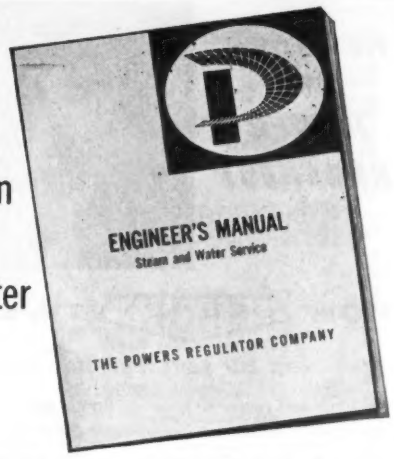
Cases are automatically opened, erected, loaded, and sealed at speeds up to 25 per minute by Model 41 casing machine. Air operated equipment handles a



wide range of rigid or semirigid package types and sizes. Feeding is from a vertical stack of up to 200 flat cases. Packages to be cased are positioned, smoothly accumulated by rows, elevated to complete any tier pattern, then end or side-loaded. Pressurized glue system is equipped with a "no-case-no-glue" control. • **Food Machinery & Chemical Corp.**, FMC Packaging Machinery Div., Stokes & Smith Plant, 4992 Summerdale Ave., Philadelphia 24, Pa.

▲ For more details circle **NED-499 D** on enclosed inquiry slip ▲

Packed With Information On Steam-Water Control Systems



The Powers *Engineer's Manual, Steam-Water Service* has been designed to save you time, effort and money. It tells you how to install a new system or how to modify, improve or update an existing one. Individual controls are described and illustrated as a means of helping you with special applications. Handy post-paid cards are included to bring you more information, prompt recommendations or assistance when required.

Send for your manual now! It's free for the asking.

POWERS CONTROL

THE POWERS REGULATOR COMPANY
Dept. 460, Skokie 44, Illinois
In Canada:
The Powers Regulator Co. of Canada, Ltd.
Downsview P.O., Toronto, Ont.

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No more drudgery for me in cleaning grease-caked floors

Flip of switch re-sharpens brushes automatically!

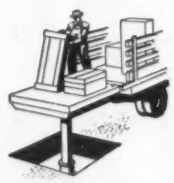
His boss is happy too . . .

and should be. A Finnell 84XR Dry-Scrubber does the job in about one-tenth the time required to hand-scrape the floors, and spares maintenance men the back-breaking effort of manual methods. Two powerful scarifying brushes, with total spread of 22 inches, quickly loosen coatings of dirt, oil, grease, and shavings. Interchangeable rings and brushes adapt the machine to wet-scrubbing, polishing, and steel-wooling. (The Vac illustrated, *Finnell's 10C,* has 1½ hp By-Pass Motor. Tank holds 12 gallons *wet,* 1¼ bushels *dry.*) For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5504 East St., Elkhart, Ind.

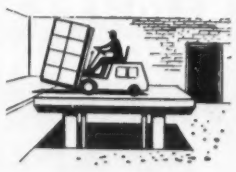
FINNELL SYSTEM, INC.
Originators of Power Scrubbing and Polishing Machines
FINNELL
BRANCHES IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-501 D** on enclosed inquiry slip ▲

Lift it the low-cost way
WITH DEPENDABLE HYDRAULIC POWER

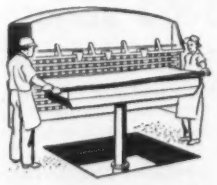


Load trucks from floor level . . . no dock needed



Move traffic from one floor level to another

Rotary Levelator Lifts, using dependable, economical oil-hydraulic power, have countless applications in modern industry. Capacities to 100,000 lbs. Standard models and special lifts engineered to your specifications. Write for catalog.



Feed machines, perform other industrial lifting jobs

Rotary **Levelator® Lifts**
ROTARY LIFT COMPANY
Division of the Dover Corporation
1175 Kentucky, Memphis 2, Tenn. • Chatham, Ont.

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Here's the *low-cost answer to chain breakdowns* caused by link-wear, stretch, corrosion and friction. OIL-RITE Chain Oilers feed oil by gravity through solenoid and sight feed valve to brush which rides the chain. Solenoid *starts and stops with driving motor,* making operation automatic, oiling only when chain moves. Drop feeding adjustable. 9 oz. — 1 gal. in capacity with brushes to suit your chains.

GIVE YOUR PLANT ALL THESE BENEFITS!
- Safe, sure chain lubrication
- Reduce chain wear
- Eliminate costly hand oiling
- Cleaner, less hazardous floors

Many styles of Electro and Manual Chain Oilers available. Write for Free Bulletin.

Oil-Rite CORPORATION
2364 WALDO BOULEVARD
MANITOWOC, WISCONSIN

Oil Cups • Dispensers • Oiling Systems • Valves • Oil Gages • Chain Oilers

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MITY-MIDGET

Cut sanding costs as much as 75% (over hand sanding), with National's Mity-Midget . . . the original orbital action sander. Weighs only 4 lbs . . . yet has 25 sq. in. of abrasive area. Powerful . . . vibrationless. Write for complete catalog, today.

Write for complete catalog
NATIONAL-DETROIT, INC.
ROCKFORD, ILLINOIS

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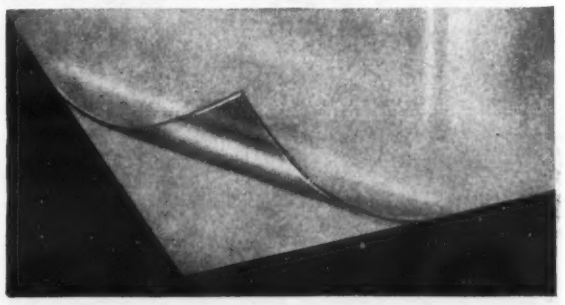
MOSINEE MAKES MAGIC WITH PAPER



Laminating and coating papers

FREE
- Developed to your requirements for performance under conditions of moisture, mold, fire, low temperatures, etc.
- Ideal for laminating with foil, glassines, films, etc. . . . for coating with waxes, plastics, resins, organosols, plastisols.
- Uniformly hard, sound rolls without soft spots or corrugations. Free from shives, other imperfections.
- Basis weight and caliper across the sheet plus other specific characteristics will be uniform from roll to roll . . . from carload to carload.

DATA FILE

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MOSINEE
PAPER MILLS COMPANY
Mosinee, Wisconsin

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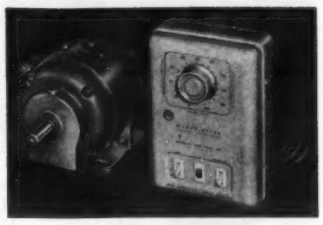
MOTOR SPEED CONTROLS
in sizes for 1/100 to 1½-hp motors



Adjustable direct-current voltages for driving dc shunt motors are provided by line of 115-v 60-cycle motor controllers. Line comprises the Junior for 1/100 to ⅛-hp motors; Size I for ¼, ⅓, and ½-hp motors; and Size II for ¾, 1, and 1½-hp motors. Regulation is about ±4 per cent of base speed, with range to 50:1. Silicon rectifiers provide a 300 per cent increase in surge safety factor. Remote or local control, and dynamic braking and reversing are among options. • **Magnetic Amplifiers, Inc.,** 632 Tinton Ave., New York 55, N. Y.

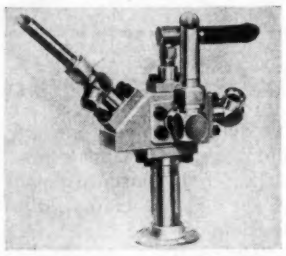
▲ For more details circle NED-506 D on enclosed inquiry slip ▲

SOLID CARBIDE BUSHINGS
improve gun drilling operations

Made to exact clearance requirements, solid carbide bushings for gun drilling applications will hold true to size up to 50 times longer than steel. Solid, rigid, carbide support improves cutting tool performance, extends tool life, and reduces down time and scrap. Standard bushings are offered in a complete range of ASA specifications. Specials can be fabricated. All types are made to gagemaker tolerances. • **S & E Machine Products, Inc.,** Bridgeport, Mich.

▲ For more details circle NED-507 D on enclosed inquiry slip ▲

HYDRAULIC TUBE FITTINGS
flange type in ¼ to 2-in. sizes



Flange type hydraulic pipe and tube fittings made of welded machine steel withstand working pressures greater than that specified for the tubing or piping involved. Equipped with O-ring seals, connections can be repeatedly disassembled and reassembled without loss of sealing ability. Outlets can be aligned with system piping in any direction. Photo shows a junction block assembled with various standard fittings. Flared tube, male and female dry-seal pipe, and weld socket outlets are available with fittings made in ¼ through 2-in. sizes. • **L & L Mfg. Co.,** 21590 Hoover Rd., Warren, Mich.

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MOSINEE MAKES MAGIC WITH PAPER

Control moisture penetration with MOSINEE moisture-resistant papers

FREE
- You can have papers with the exact degree of moisture resistance you specify.
- Unvarying Mosinee quality permits you to maintain quality control of such products as multi-wall paper bags, electrical insulation, furniture and other product wrappings, balings, building insulation and tarpaulins.
- You get paper made to the same formula and basis weight from roll to roll . . . from carload to carload.

DATA FILE

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PAPER MILLS COMPANY
Mosinee, Wisconsin

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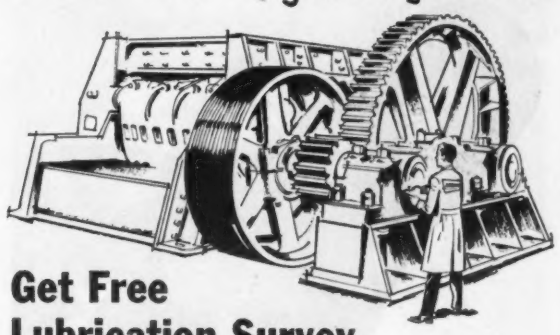
to eliminate costly bearing failure



Get Free Lubrication Survey of Your Production Equipment

At your convenience, an experienced Farval Lubrication Engineer will scientifically survey all your plant equipment. His report will tell you:
- Most economical way to lubricate each piece of equipment
- Whether your equipment can be protected by centralized lubrication
- Cost of centralized lubrication on your production machinery
- How centralized lubrication can increase bearing life, save maintenance costs, and increase production.

Write today for your free copy of Bulletin 26-T. It gives the cost-cutting advantages of centralized lubrication and shows how you can keep production equipment in top-operating condition, month after month—year after year.

Farval Division
Eaton Manufacturing Company
3283 East 80th Street
Cleveland 4, Ohio

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SAFER HANDLING
of INDUSTRIAL LIQUIDS!

Eliminate in-plant accidents caused by slick floors and spilled inflammables! This TOKHEIM Hand Pump, for use on drums or skid-tanks, has 8′ hose—or spout outlet—prevents dangerous, wasteful slopping of oils and many other liquids. Speeds production. Pumps 20 gallons per 100 strokes. Ask your dealer, your Tokheim representative or write for list of liquids.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Avenue • Fort Wayne 1, Ind.

Subsidiaries: Tokheim International, A.G., Lucerne, Switzerland; GenPro Inc., Shelbyville, Indiana; Tokheim of Canada, Ltd., Toronto, Ontario

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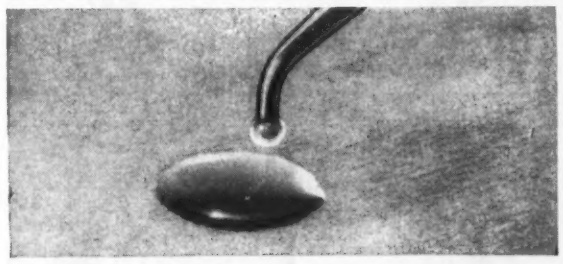
MOSINEE MAKES MAGIC WITH PAPER



Mosinee noncorrosive, grease-resistant papers for product protection

FREE
- Ideal for barriers, wrappings for electrical and metal parts, drip sheets, factory tarpaulins and floor coverings, liners, etc.
- High resistance to greases and oils, moisture and vapors.
- Good bursting and tear strength.
- Uniform quality from roll to roll . . . from carload to carload.

DATA FILE

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MOSINEE
PAPER MILLS COMPANY
Mosinee, Wisconsin

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MASTIPAVE

.. floors that can take it!

Immune to heavy traffic, Mastipave takes a beating for years without showing signs of wear. Resists dirt, scratches. Is even self-healing. Lay low-cost Mastipave anywhere without surface preparation. Also available: new Deco Tread Mastipave in bright new colors and Grip Tread Mastipave for safe, non-slip floors.

FREE ILLUSTRATED BOOKLET

Send for a free informative booklet with case histories and technical data. Pabco Mastipave, Fibreboard Paper Products Corp., 475 Brannan St., San Francisco

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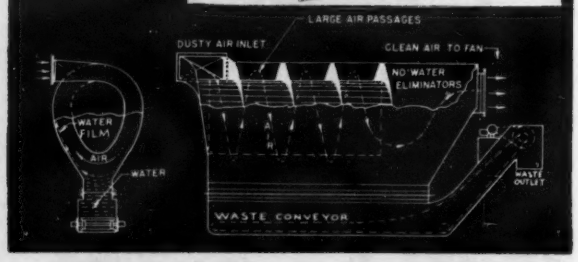
The MASTER of DUST in INDUSTRY

IS THE . . . . Air Tumbler



The Wet Collector that becomes Standard Equipment wherever tried because it does a better job at less cost.

More than one million CFM in ONE plant

Write for Bulletin No. 581. Address:

DUST SUPPRESSION & ENGINEERING CO.

P. O. BOX 67 • LAKE ORION, MICHIGAN

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Nothing clamps a hose quicker, easier or more economically than Eaton-Reliance Hoz-Fas-Ner.® It stays tight, will not cut hose, and can be used for pressure *or* vacuum lines. Write for details.

EATON RELIANCE DIVISION MANUFACTURING COMPANY 509 CHARLES AVENUE • MASSILLON, OHIO

SALES OFFICES: NEW YORK • CLEVELAND • DETROIT CHICAGO • ST. LOUIS • SAN FRANCISCO • LOS ANGELES

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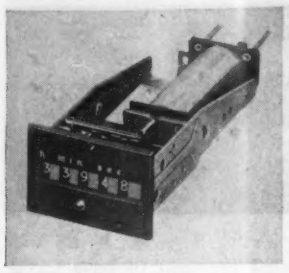
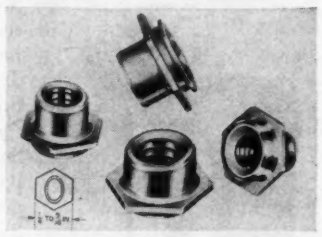
TIME INDICATORS
show hours, minutes, seconds



Compact electromechanical Sodeco hours, minutes, and seconds indicators show time when pulsed each minute, second, or 1/5 or 1/10 second by a suitable impulse transmitter. Four and five-digit models have instantaneous mechanical toggle-type zero reset. Remote electric reset type is also available. The four-digit model measures only 1⅜ x 1¼ x 4 1/16 in. All are suitable for flush panel mounting and require 1.6 w at 24 v dc. • **Landis & Gyr, Inc.**, 45 W. 45th St., New York 36, N. Y.

▲ For more details circle NED-516 D on enclosed inquiry slip ▲

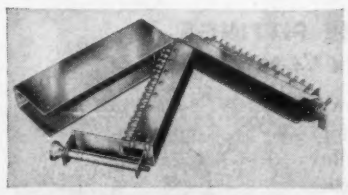
SELF-LOCKING NUTS
used as aluminum or brass inserts



Hexagonal shaped line of self-locking captive nuts is designed for material thicknesses of 1/16, 3/32, ⅛, 3/16, and ¼ in. They act as stainless steel threaded inserts for use in aluminum or brass. One basic type is offered in 4-40, 6-32, 8-32, and 10-32 sizes. All have a passivated finish. • **National Radio Co.**, Melrose, Mass.

▲ For more details circle NED-517 D on enclosed inquiry slip ▲

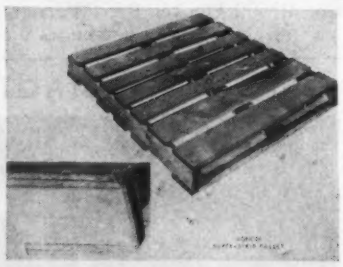
MULTICONTACT CONNECTORS
in 40, 60, 80, and 100-pin sizes



Electronic cable - to - cable, cable - to - fixture, and fixture-to-fixture applications are typical uses for MTC Series of multicontact connectors. These plug and receptacle assemblies are offered in 40, 60, 80, and 100 pin sizes. They feature a handy locking bolt for securing both portions together and an easily removed cover. Cable clamp adjusts for various cable sizes. Both solder and taper tab terminals are available, and hardware has a zinc-chromate finish. • **North Electric Co.**, Galion, Ohio.

▲ For more details circle NED-518 D on enclosed inquiry slip ▲

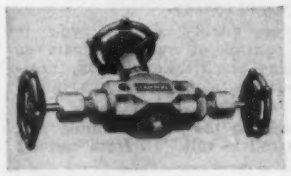
REINFORCED WOOD PALLET
two and four-way entry types



Service life of Super-Strip wooden warehouse pallet is considerably lengthened by reinforcing it with ¾ x 0.035-in. plastic - coated steel strapping. Nailable strapping is treated to bend well. Two and four-way entry types are designed to eliminate snagging. Cost is slightly higher than standard pallet. • **Signode Steel Strapping Co.**, 2600 N. Western Ave., Chicago 47, Ill.

▲ For more details circle NED-519 D on enclosed inquiry slip ▲

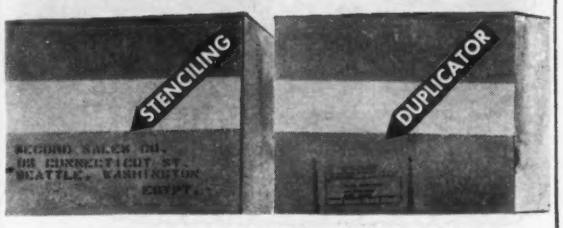
VALVE MANIFOLD
single body has three valves



Simple means of making connections to flow meters, level indicators, and other types of instruments is provided by this instrument valve manifold. It combines three valves in a single body—two providing suitable line shut-off and one that equalizes pressure to protect the instrument's internal working parts. A connection cap permits calibration of the high pressure side of the system. Body and working parts are stainless steel. Either screwed or socket weld end connections are offered. • **Yarnall-Waring Co.**, Chestnut Hill, Philadelphia 18, Pa.

▲ For more details circle NED-520 D on enclosed inquiry slip ▲

HAVE YOU CHECKED THE READABILITY OF YOUR SHIPMENT ADDRESSING LATELY?



COMPARISON OF READABILITY FROM A DISTANCE OF SIX FEET.

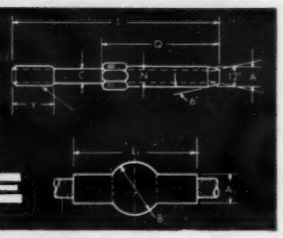
In this day of increased freight rates caused by freight claims due to lost shipments it's time to take a close look at your shipment addressing. Are you getting clear, readable, large letter results? If not you should be interested in better addressing through the use of machine cut stencils. Keep this in mind — regardless of how you apply your address — it must be read easily by freight handlers.

IT'S THE RESULT THAT COUNTS

For a peek into what improper marking is costing you send for this FREE booklet of facts today. WRITE TO DIAGRAPH-BRADLEY INDUSTRIES, INC. P. O. BOX 269 HERRIN, ILL.

▲ For more details circle NED-521 D on enclosed inquiry slip ▲

FREE DESIGN SERVICE



Whether you are planning a "routine" job, pioneering in uncharted territory or just re-evaluating present needs, you should take advantage of the expert assistance of Bergen's design engineers. They will prescribe the precise cable or assembly to meet your requirements . . . custom tailor one for you if that will do the job more efficiently. Call or write today for details . . . no obligation, of course.

A Note To Remember: Throughout industry, Bergen is famous for fast deliveries!

BERGEN WIRE ROPE CO.

502 GREGG ST. • LODI, N. J. • HU 7-3521

"Specializing in the Unusual"

▲ For more details circle NED-522 D on enclosed inquiry slip ▲

6 KVA

Automatic Line-Voltage Regulator Servo Type

- **High Accuracy:** Holds Line Voltage Constant to ±0.25%
- **High Speed of Response:** 10 or 20 volts per second
- **Output Independent of Load**
- **Output Voltage Variable** ±10%
- **Handles Line Voltage Variations to Either** 10% or 20%
- **No Waveform Distortion or Power-Factor Restrictions**
- **No Relays — No Chattering**
- **Withstands Short-Period Overloads to 500 Amperes**

Type 1570-AL (115 volts, 60c): $530 Type 1570-AH (230 volts, 60c): $550

A number of other models available. Write for information.

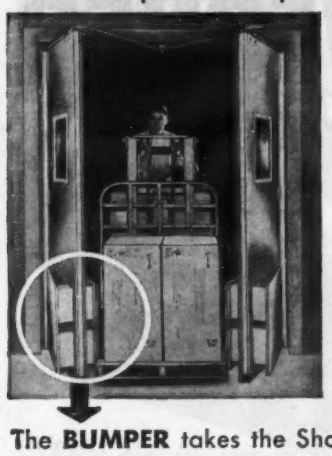
GENERAL RADIO COMPANY

WEST CONCORD, MASSACHUSETTS

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA 1000 N. Seward St. LOS ANGELES 38 8055 13th St., Silver Spring, Md. WASHINGTON, D. C. 1150 York Road, Abington, Pa. PHILADELPHIA 1186 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO 6605 W. North Ave., Oak Park, Ill. CHICAGO In CANADA: 99 Floral Parkway, TORONTO 15

▲ For more details circle NED-523 D on enclosed inquiry slip ▲

Not just an improved Impact Door



. . . but a totally new concept!

CLARK SHOCK ABSORBER DOOR

The BUMPER takes the Shock — *Not the Door*

Fed up with Impact Doors that rip, warp or come off the fastenings? The new Shock Absorber Door keeps traffic moving without slow-downs or bottlenecks. No costly "time-outs" for repair.

Exclusive Urethane-Filled Bumpers absorb shocks that would wreck ordinary doors. Yet the lightweight Shock Absorber Door opens freely at a gentle touch. Spring motor retriever returns it unfailingly to closed position. Flexibly suspended hinges never need maintenance—not even oiling or tightening. Neoprene seals at all edges keep wanted air IN—unwanted air OUT.

Learn why so many Companies, after purchasing one Door, have reordered several more. Write for full data. Please specify dimensions.

CLARK DOOR COMPANY, INC. (since 1878) — 511 Hunterdon St., Newark 8, N. J.

▲ For more details circle **NED-524 D** on enclosed inquiry slip ▲

Surety saves you money

FOUR-2-ONE

VINYL IMPREGNATED WORK GLOVES

SLIP ON STYLE

PROVIDING *Longer Wear at Lowest Cost*

As the name indicates, count on these Surety gloves outwearing cotton and many leather types **four or more to one** in most work. Users report great resistance to snagging and abrasion plus easy finger flexing and hand comfort. You can wash them, too; come up sparkling bright and lint free. Available in men's and women's sizes, two styles illustrated. Want samples? Check your Surety distributor or write today.

KNIT WRIST STYLE

THE SURETY RUBBER CO. CARROLLTON, OHIO — Dept. N

In Canada: Safety Supply Co., Toronto

▲ For more details circle **NED-525 D** on enclosed inquiry slip ▲

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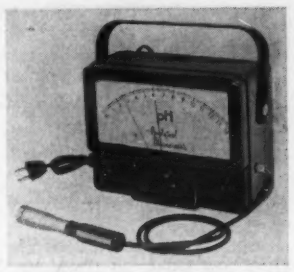
pH METER
big scale model reads to 0.02 pH



Portable Model 700 Big Scale pH meter makes it simple to read values to within 0.02 pH. The 5-lb, 115-v ac instrument has a single operating control, a high output electronically modulated amplifier, and printed circuitry. Polyethylene electrode probe unit enables user to bring the meter to the sample. Price with probe unit, buffer, and KCl solutions is $145. • **Analytical Measurements, Inc.,** 585 Main St., Chatham, N. J.

▲ For more details circle **NED-527 D** on enclosed inquiry slip ▲

TRACTOR-SHOVEL
has 3000-lb operating capacity

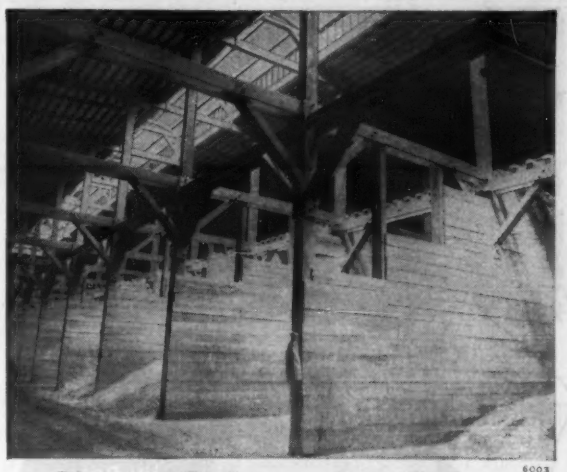
Powered by a 77½-hp heavy-duty gasoline engine, Model H-30 Payloader tractor-shovel is equipped with a 1-cu yd bucket and has an operating capacity of 3000 lb. Four-wheel drive features power-shift Paylomatic transmission with matched torque-converter. Four-wheel sealed hydraulic brakes assure equal braking action in either direction. Clearance under the cutting edge, with bucket in dumped position, is 8 ft 4 in. Dual foot brake affords choice of braking with the transmission engaged or disengaged. • **Frank G. Hough Co.,** 746 Seventh Ave., Libertyville, Ill.

▲ For more details circle **NED-528 D** on enclosed inquiry slip ▲

PNEUMATIC VIBRATOR
develops forces of over 1 ton

With speed of 10,000 rpm or more, this TurboViber external type pneumatic vibrator develops forces of well over 1 ton. Simplicity of design contributes to ease of maintenance and low operating cost. It is driven by a turbine wheel, is simply constructed, and can be mounted by five different methods. • **Viber Co.,** 726 S. Flower St., Burbank, Calif.

▲ For more details circle **NED-529 D** on enclosed inquiry slip ▲



6003

Sunshine is free
...why pay for light?

Cut light bills with skylights of Structoglas fiberglass reinforced panels. Translucent Structoglas lets in free sunshine—filters out glare. Maintenance costs practically nothing. Structoglas is shatterproof, needs no painting, is unconditionally guaranteed for three years. Corrugated panels are easy to install; no sash needed. Also available in flat glazing panes for replacing broken glass.

Write for detailed literature — **structoglas®**

Structoglas Inc., Dept. 406 Cleveland 9, Ohio

▲ For more details circle **NED-530 D** on enclosed inquiry slip ▲

THE CLEANING MACHINE THAT GOES ANYWHERE

TORNADO® PAC-VAC®

Thousands of these handy Tornado Pac-Vacs are being used throughout industry today. Practically every mail brings word of some new cleaning operation being done by this versatile cleaner.

Pac-Vac is a powerful motor and impeller unit mounted on a comfortable pack frame. With a filter bag it is used as a vacuum cleaner. By changing the hose it becomes a powerful (325 mph) air sweeper or blower.

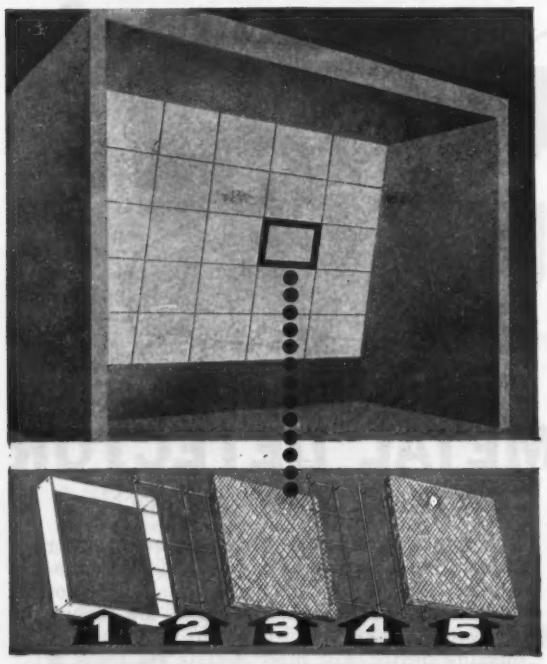
Buy several and keep them throughout your plant. They're available in ¾, 1 or 1½ H.P. motor units.

WRITE FOR BULLETIN #921 TODAY

BREUER ELECTRIC MFG. CO.

5116 N. Ravenswood Avenue, Chicago 40, Illinois

▲ For more details circle **NED-531 D** on enclosed inquiry slip ▲



A Paint Arrestor module consists of a Holding Frame (1), two Snap-in Grids (2 and 4), two Paint Arrestors (3 and 5). Loaded Paint Arrestors are simply replaced as necessary. And, they're also ideal for air-borne ink, mist, dye, frit, etc.

CONTROL PAINT OVERSPRAY the inexpensive, effective way!

The advantages of R P Paint Arrestors, the inexpensive, disposable air filters are many. Overspray solids are trapped before they reach the exhaust stack... to reduce fire hazards, damage to adjacent property... disagreeable and time-consuming maintenance work. Installation? —easy and fast. Maintenance? —remove loaded Paint Arrestor and replace a new one. Adaptability? —ideal for any type, any size booth, new or existing.

RP® PAINT ARRESTORS

UL Listed

RP Products of Research

RESEARCH PRODUCTS Corporation

Dept. 32, MADISON 1, WISCONSIN

▲ For more details circle **NED-526 D** on enclosed inquiry slip ▲

Put your finger on it FAST... with the Wassell TWIN CONTROLS

Produc-Trol® will give you delivery dates, parts supply, project status.

Vu-Board will tell you if the machines are loaded to meet those dates.

There's no digging in files or calling for reports . . . The facts are right in front of you to foresee problems in time to solve them.

For more information, write:

WASSELL ORGANIZATION, INC.
DEPARTMENT N-4 • WESTPORT, CONNECTICUT • EST. 1935

For more details circle NED-532 D on enclosed inquiry slip

Built to handle a wide variety of parts—sizes and shapes—the OBE's versatility and rugged design make it a valuable asset in integrating and automating production line operations. Even and continuous flow is provided. Costly and tedious manual operations are eliminated.

Special Features Include:

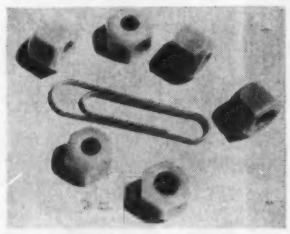
- High-speed feeding of a wide range of part sizes and shapes.
- Variable discharge track height.
- Variable speed drive to meet machine demands.
- Large storage capacity.
- Automatic feed controls and special orientation devices available. Right- or left-hand discharge to suit your needs.
- Rugged construction—standard components.
- Ease of maintenance—all parts readily available.

Write for complete details on the new RCA Orienting Belt Elevator. Also ask about RCA's full line of automatic feeding equipment.

RADIO CORPORATION of AMERICA
Tmk(s)®
Visit the RCA Booth at the ASTE Tool Show
INDUSTRIAL AND AUTOMATION DIVISION
12605 Arnold Avenue • Detroit 39, Michigan

For more details circle NED-533 D on enclosed inquiry slip

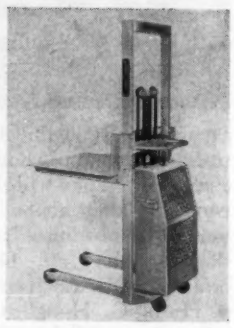
PLASTIC LOCK NUTS
have 500 to 700-lb holding strength



High strength, rigidity, dimensional stability, and resistance to water and organics are characteristics of nontoxic open-end acorn lock nuts made of Du Pont Delrin. Lightweight, abrasion resistant, and smooth, fasteners form their own threads as they are used, so that the No. 10 size fits both 10-24 and 10-32 theads and the 1¼-in. size fits ¼-20 and ¼-28 threads. Pigmented colors are metallic gray to blend with aluminum, metallic gold, and natural off-white. Smaller size has a 500 to 600-lb holding strength and the larger size a 600 to 700-lb holding strength. Respective torques are 8 to 10 lb and 10 to 14 lb. • **Russell, Burdsall & Ward Bolt & Nut Co.,** Dept. DN, 104 Midland Ave., Port Chester, N. Y.

For more details circle NED-534 D on enclosed inquiry slip

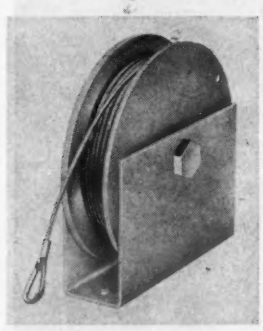
SMALL LIFT TRUCK
battery powered unit lifts 1000 lb



Weighing only 330 lb and capable of passing through a 78-in. door, the Model BHD Little Dickie portable lift truck utilizes a battery-powered hydraulic system and a built-in overnight charger. It lifts, transports, and positions loads weighing up to 1000 lb. The 26 x 28-in. platform rises from 4½ in. above the floor to 64 in. at 20 fpm. Double lifting chains and rollers handle side thrust platform loads safely. Price is $394. • **Langley Mfg. Co.,** 913 Cambridge St., Cambridge 41, Mass.

For more details circle NED-535 D on enclosed inquiry slip

COUNTERBALANCE-RETRACTOR
easily installed for varied uses

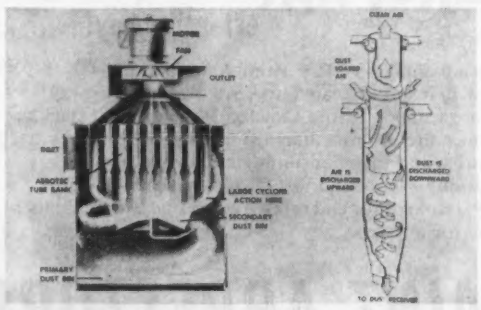


Operating on a clock spring principle, the Balator counterbalance and retractor mechanism is adaptable to many industrial uses. It is offered with or without its steel mounting bracket, and is easily installed in any position. Force, length of nylon coated steel cable, and travel characteristics can be varied to suit the application. Diameter of aluminum drum is 5⅝ in. and width is 2 5/32 in. Applications include balancing and/or retracting truck tail gates, overhead doors, sliding doors and panels, suspended ceiling tools, and hose loops. • **Caldwell Mfg. Co.,** Box 444, Rochester 2, N. Y.

For more details circle NED-536 D on enclosed inquiry slip

DUST COLLECTORS
300 to 2100-cfm capacities

High concentrations of dust in a wide range of particle sizes are handled by this improved line of filterless integral dust collectors. Dust-laden air passes



through a primary cyclone for removal of large, heavy particles, then through a secondary collector comprised of 2-in. diameter tubes of new design, installed in multiple to the capacity required. After this final cleaning, air goes through the fan to the outlet. Dust collector has no pressure build-up and is offered in seven standard sizes from 300 to 2100 cfm. Accessories include single and multi-inlet adapters. Special units from 30 to 50,000 cfm can be built. • **Aerotec Industries, Inc.,** Industrial Div., Greenwich, Conn.

For more details circle NED-537 D on enclosed inquiry slip

⅓ the weight—3 times as safe

WERNER ALUMINUM LADDERS

Pick it up—carry it around—these sturdy aluminum ladders are designed for easy one-man handling. Designed for safe operation on any kind of job, they are made of rugged aircraft aluminum—the safest, lightest, longest-lasting material for ladders.

Check your ladders today. If they are due for replacement (and usually they are) make a long term investment in safety—call your dealer and order a Werner Aluminum ladder.

"THE STANDARD OF THE INDUSTRY"
R. D. WERNER CO. INC.
1007 OSGOOD ROAD • GREENVILLE, PA.

For more details circle NED-538 D on enclosed inquiry slip

what do you know about cable conveyors?

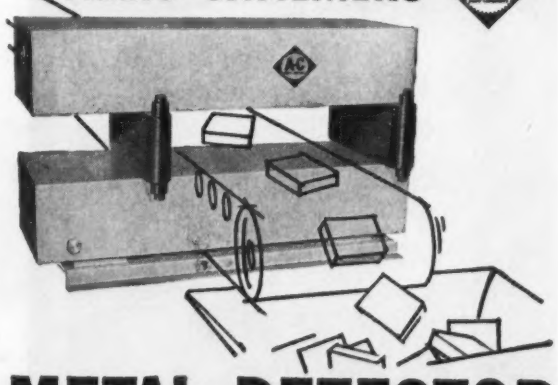
Don't be mislead, be well-read! Get all the facts on Dearborn Cable-Link. Find out about Cable-Link capacity—greater pay load per pound of drive than any other system. Find out about the versatility of Limber-Dip, about performance and economy. Production men who think, choose Cable-Link!

Dearborn Cable-Link Conveyor
MANUFACTURED BY
DEARBORN FABRICATING & ENGINEERING CO.
19440 GLENDALE AVE. DETROIT 23, MICH.

Write now for Dearborn's WHY CABLE Brochure.

For more details circle NED-539 D on enclosed inquiry slip

ALLIS-CHALMERS



METAL DETECTOR

Protects your products and machines

Stop stray metal before it has a chance to lower your product quality or damage expensive machines. This Allis-Chalmers Metal Detector finds metal particles as small as .07 inches. Activates warning light, alarm or automatic ejecting device. *For more details get Bulletin 15B7217B from your A-C representative or write* ***Allis-Chalmers,*** *General Products Division, Milwaukee 1, Wisconsin.* A-1257

For more details circle NED-540 D on enclosed inquiry slip

ROPER PUMPS

0.3-300 GPM Capacities
Pressures To 1,000 PSI

PUMPS FOR ALL INDUSTRIES
For hydraulic, pressure feed and transfer applications—Roper rotary pumps are used in petroleum, processing and general manufacturing industries.

Write for 38 page booklet "How To Solve Pumping Problems."

ROPER ROTARY PUMPS

ROPER HYDRAULICS, INC.
DEPT. 664, P. O. BOX 269
COMMERCE, GEORGIA

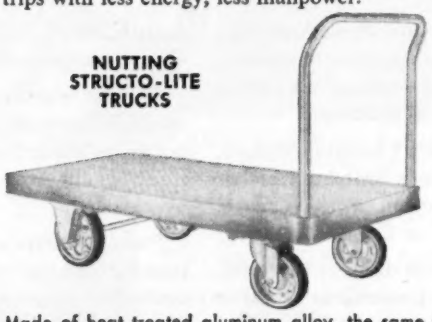
▲ For more details circle NED-541 D on enclosed inquiry slip ▲

Built for rugged service... **2 NEW**

lightweight floor trucks

Here are 2 new trucks that feature corrosion-free properties plus strength without weight . . . up to 40% lighter than steel. This permits use in almost any industry plus larger loads and more trips with less energy, less manpower.

NUTTING STRUCTO-LITE TRUCKS



Made of heat treated aluminum alloy, the same type used for heavy duty structures . . . non-sparking for safety where explosive material is used, non-toxic and resistant to attack by food and unaffected by most chemicals, and many acids and alkalies. Exclusive Nutting unitized frame construction holds proper alignment throughout unusual loads and abuse. New 3 bearing "friction-free" casters for easiest possible maneuvering.

NUTTING FIBERGLASS BOX TRUCKS

Weigh as little as 70 lbs. (steel trucks of the same size 120 lbs.!). Chrome impregnated fiberglass is impervious to steam, oil and mild acids and alkalies—won't crack or corrode—withstands temperatures from —40°F to 212°F, even up to 250°F for short exposures. Smooth inside with rounded corners for easy cleaning.

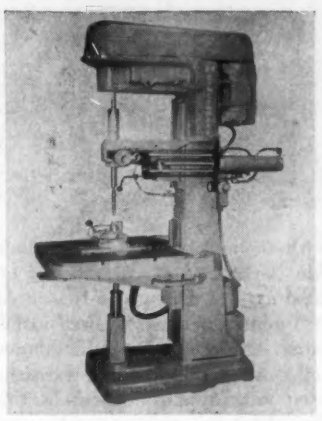
These light, but extra rugged trucks are designed to increase your handling efficiency and to save you money—based on lighter weight, longer life, reduced maintenance and less downtime.

FOR COMPLETE PRODUCT LITERATURE WRITE OR CALL TODAY

Nutting TRUCK AND CASTER CO.
482 DIVISION STREET
FARIBAULT, MINNESOTA

▲ For more details circle NED-542 D on enclosed inquiry slip ▲

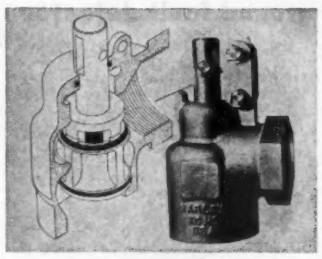
DRILL PRESS FEEDS
are geared head transmission units



Geared head models of air powered drill press feeds have either mechanical (manual) or electrical control. Drill point stroke and thrust ranges from 8-in. stroke at 625-lb maximum thrust, to 2-in. stroke at 2500-lb thrust, on 1¼-in. pinion shaft at 100-psi air pressure. Feed is shown mounted on a 1-in. capacity drilling machine with guard removed. Pick-off type outside gears are interchangeable. • **Beckett-Harcum Co.**, 985 W. Locust St., Wilmington, Ohio.

▲ For more details circle NED-543 D on enclosed inquiry slip ▲

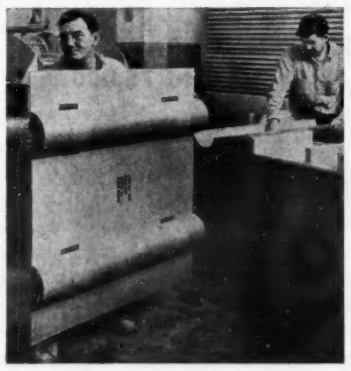
FLOAT VALVE
is of corrosionproof construction



Body and plug are the two basic parts of the corrosionproof DA float valve, maintenance of which requires only pliers. Plug and stem are cast as an integral unit. Unit-cast body has a threaded inlet opening and optional threaded outlet opening. O-rings form stem seal and plug seats and cannot become stuck or fouled by foreign matter in water. Float is either Tenite plastic or copper. • **Marley Co.**, 222 W. Gregory Blvd., Kansas City 14, Mo.

▲ For more details circle NED-544 D on enclosed inquiry slip ▲

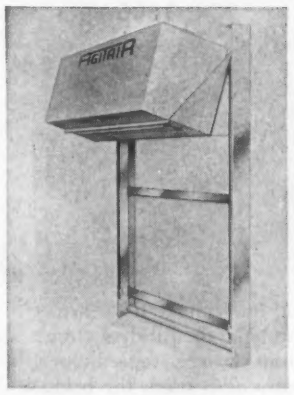
DISPOSABLE PALLET
paperboard type supports 36 bags



Lightweight, disposable paperboard pallet consists of a sheet of double wall corrugated board with two attached half-cores of laminated kraft paperboard centered to fit any type fork lift truck. Pallet supports up to 36 filled bags. Weighing only 8 lb, it makes possible savings in dead weight and increases payload of transporting truck. Pallets loaded with 30 to 36 bags have been stacked four high, and the half-cores have held 12,000-lb loads. • **Union Bag-Camp Paper Corp.**, 233 Broadway, New York 7, N. Y.

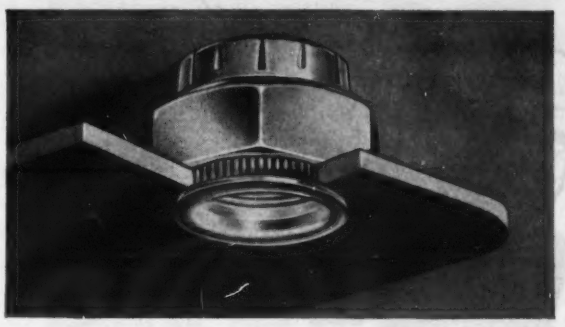
▲ For more details circle NED-545 D on enclosed inquiry slip ▲

AIR FILTER
uses 2-in. glass fiber blanket



Manually operated Agitair Type DS pull-down air filters have uniform air filtration over the entire active length of their 2-in. thick glass fiber media. When a new length of the high dust holding capacity blanket is required, it is pulled down and the dirty length cut off and thrown away. A strong fiberboard container holds the folded media on a supporting rack at the top of the frame. Heights of 6 to 12 ft in 4-in. increments are offered in 3, 4, and 5-ft widths which can be grouped to obtain any desired capacity. Intermediate heights in 4-in. increments are also available. Capacities range from 7222 to 15,472 cfm for 3-ft wide, 6 to 12-ft high units at 533 fpm. • **Air Devices Inc.**, 185 Madison Ave., New York 16, N. Y.

▲ For more details circle NED-546 D on enclosed inquiry slip ▲



Easiest way to put tapped holes in sheet metal—FLEXLOC clinch nuts

- Serve as locknuts or stopnuts—hold screw tight wherever wrenching stops.
- Save time in blind mounting—hollow shank serves as guide for screw.
- Easily installed. No riveting, no welding, no auxiliary locking elements to worry about.
- Reusable repeatedly without loss of locking power.

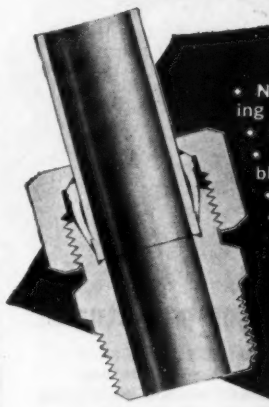
Get FLEXLOC self-locking clinch nuts from your SPS distributor. Sizes #0 to ¼ inch—for materials from 1/32 to 3/16 inch thick. Or write us for literature and samples.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle NED-547 D on enclosed inquiry slip ▲

WEATHERHEAD ERMETO® TUBE FITTINGS

in STEEL or STAINLESS STEEL



- No flaring, welding, threading or solder needed
- No special tools required
- Assembled and disassembled quickly and easily
- For low or high pressure applications
- S.A.E. or J.I.C. standards
- Sizes: ⅛" to 2"
- Positive, leakproof, vibration and corrosion resistant connections good for the life of the tubing.

YOUR SINGLE-SOURCE SUPPLIER OF ALL INDUSTRIAL HOSE & FITTINGS NEEDS

THE WEATHERHEAD COMPANY
FORT WAYNE DIVISION
Dept. NED-4, 128 W. Washington Blvd., Fort Wayne, Indiana

▲ For more details circle NED-548 D on enclosed inquiry slip ▲

Disc meter

Turbine meter

Heavy-duty Badger water meters

maintain high accuracy . . . low pressure loss

Badger industrial disc meters available from ⅝" to 2"; turbine meters, 2" to 12" inclusive. 2" stainless steel oscillating piston models also available. All handle flows to 212° F.

Typical applications: Batching meters for chemical and fertilizer plants; interdepartmental metering; regulation of water treatment. Electric alarm, electric contacting and remote reading registers offered as accessories.

Write for descriptive literature

Badger Meter Mfg. Co.
Industrial Products Div. • Milwaukee 23, Wisconsin

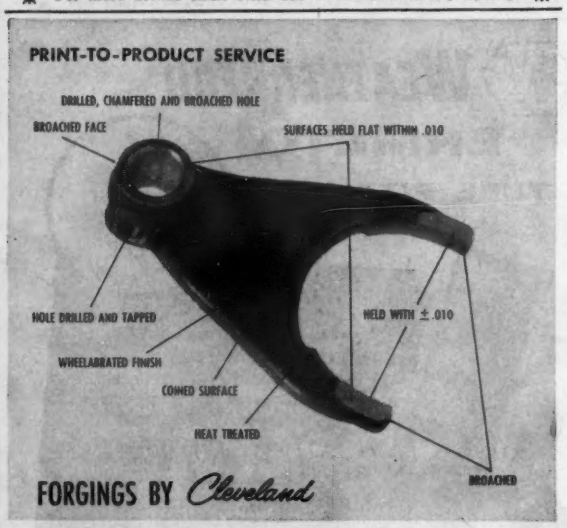
▲ For more details circle NED-549 D on enclosed inquiry slip ▲

Look at Witt's outstanding features — straight sides, deep rolled corrugations, solid beaded bands—top and bottom, heavy duty steel, wear resistant bottoms, sturdy lids and hot-dip galvanized after fabrication!

WITT Cans

THE WITT CORNICE COMPANY
4454 Steel Place, Cincinnati 9, Ohio

▲ For more details circle **NED-550 D** on enclosed inquiry slip ▲



How many of these steps does your product need?

If you can use skills and close tolerances like these, write for information to *Forge & Fittings Division, H. K. Porter Company, Inc., 3270 East 79th Street, Cleveland 4, Ohio.*

FROM A SINGLE SOURCE:
FORGINGS... Hammer, Press, Upset
MACHINING... Broaching, Milling, Turning, Drilling, Grinding
FINISHING... Heat Treating, Assembling, Painting, Plating

FORGE & FITTINGS DIVISION PORTER *H.K.PORTER COMPANY, INC.*

PORTER SERVES INDUSTRY with 14 DIVISIONS including: Thermoid, Delta-Star Electric, National Electric, Peerless Electric, Riverside-Alloy Metal, Refractories, Connors Steel, Vulcan-Kidd Steel, Forge and Fittings, Coldform, Disston, Leschen Wire Rope, H. K. Porter Company de Mexico, S. A., and H. K. Porter Company (Canada) Ltd.

▲ For more details circle **NED-551 D** on enclosed inquiry slip ▲

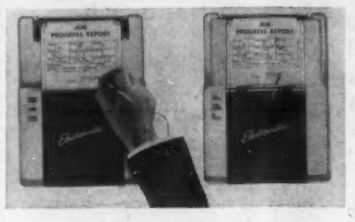
HAMILTON—the complete line... the quality line
INDUSTRIAL CASTERS and WHEELS

When you need casters and wheels, specify the Hamilton line—one of the world's most complete selections of sizes, styles and capacities. Get Hamilton quality, performance, service—at low competitive prices. Send today for Hamilton's Caster and Wheel Catalog, and name of nearest Hamilton distributor.

Please send me a Hamilton Caster and Wheel Catalog
NAME.....
COMPANY.....
ADDRESS.....
CITY.....ZONE.....STATE.....
THE HAMILTON CASTER & MFG. CO., 1762 Dixie Hwy., Hamilton, Ohio

▲ For more details circle **NED-552 D** on enclosed inquiry slip ▲

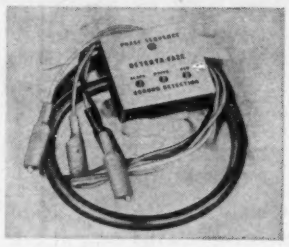
REMOTE WRITING INSTRUMENTS
writing transmitted by phone, radio



Written messages or sketches can now be transmitted over telephone or radio circuits to any point, however distant, with Electrowriter instruments. Transmitting party writes with a ball point pen on plain or form paper. As pen is moved, remote receiver or receivers instantly reproduce the copy as it is written. Any number of instruments, in any desired combination and any distance apart, can be interconnected. Instruments are self-contained and fully transistorized. Systems can be used within plant offices for message service only, or for alternate writing and voice service. For longer distances, instruments can operate over any leased voice circuit with or without alternate telephone service. • **Comptometer Corp.,** Communications & Electronics Div., 5600 Jarvis Ave., Chicago 48, Ill.

▲ For more details circle **NED-553 D** on enclosed inquiry slip ▲

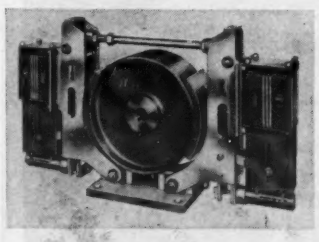
PHASE SEQUENCE INDICATOR
combined with ground fault detector



Direction of rotation of any motor can be determined without starting the equipment by the Detekta-Faze, a self-contained phase sequence indicator. Measuring 2¾ x 2½ x 1 in., it uses only one light for phase detection. Device is used on two-phase three-wire systems and three-phase three and four-wire systems within its operating range of 200 to 500 v, 60 cycles ac. A built-in ground fault detector is effective for two or three-phase three-wire ungrounded systems. Permanently attached heavy duty cable has four color-coded leads terminating with insulated alligator clips. Price is $19.95. • **Glo-Lite Instrument Co.,** 428 Peshine Ave., Newark 12, N. J.

▲ For more details circle **NED-554 D** on enclosed inquiry slip ▲

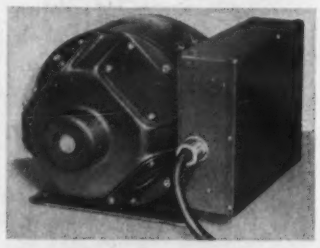
SOLENOID BRAKE
in 1400 to 75,000 lb-ft torques



Wheel diameters from 18 to 72 in. and torque capacities from 1400 to 75,000 lb-ft are available in this Trombetta solenoid brake. Unit is operated by two separate and independent solenoids, either of which can release the brake without the help of the other. If one solenoid fails, the other takes over instantly. Each operating unit has its own rectifier, either of which will operate either one of the solenoids. Typically used in operation of mine hoists, brakes can be adapted to similar industrial applications. • **Trombetta Solenoid Corp.,** 329 N. Milwaukee St., Milwaukee 2, Wis.

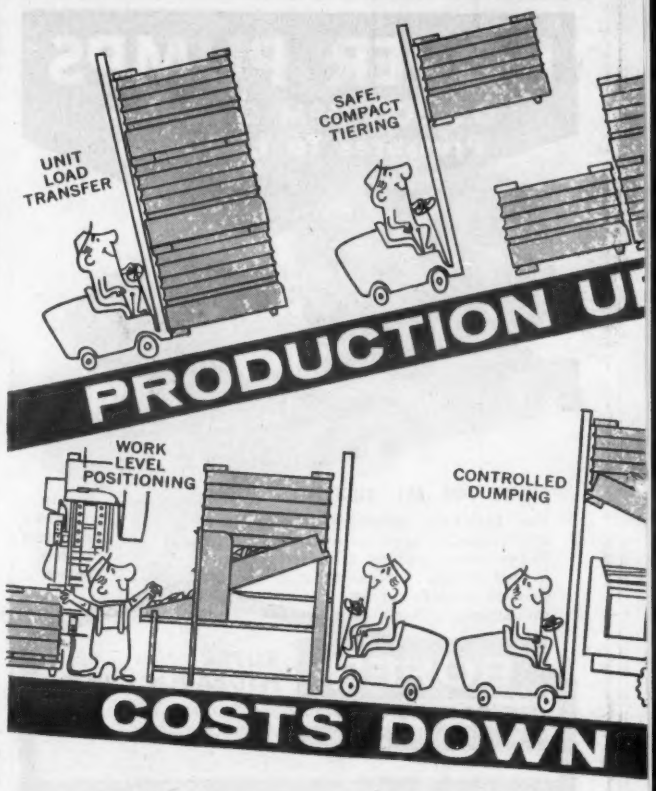
▲ For more details circle **NED-555 D** on enclosed inquiry slip ▲

AC-DC MOTORS
ratings to 7½ hp at 1200, 1800 rpm



Line of integral horsepower alternating and direct current motors makes use of standard open ventilated motors packaged with four silicon rectifiers in a bridge circuit. Ratings up to 7½ hp are available in 1200 and 1800-rpm speeds. Disregarding the voltage drop in the rectifiers, 115-v dc passes through the bridge circuit to the motor terminals without change, regardless of polarity. When alternating current is used, the bridge circuit provides full-wave rectification for pulsating direct current operation, and the 115 v ac drops to 103 v at the terminals. Rectifiers are protected against damage by overload. Load requirements must be known so that they can be matched with the horsepower output. • **Robbins & Myers, Inc.,** Industrial Motor Div., 1345 Lagonda Ave., Springfield 99, Ohio.

▲ For more details circle **NED-556 D** on enclosed inquiry slip ▲



▲ For more details circle **NED-557**

NOW! *Fuses that*

Safely interrupt fault currents up to 200,000 amperes . . .

Limit fault current to very low values

Hold 500% load for minimum of ten seconds

Buss Low-Peak fuses can completely revolutionize the protection of the entire electrical system.

Protect Circuits, Motors, Controllers, Switches whether fault current is 1,000 amps, 100,000 or 200,000 amps.

Prevent damage to Panelboards, Controllers or other circuit components. Let-thru fault currents are limited to exceptionally low values.

Prevent waste of time and money—because long time lag keeps them from opening needlessly on harmless overloads.

Permit increasing interrupting capacity and current limitation on present system at minimum cost. 480

▲ For more details circle **NED-558**

The Authorized S

Spherical, Cylindrical, Ball, and "Timken" Tapered Roller Bearing

▲ For more details circle **NED-559**

with Versatile

WORK-O-MATIC* HANDLING SYSTEM

Work-O-Matic Drop-Bottom Boxes increase efficiency and solve many troublesome handling problems. The Union Metal Manufacturing Co., Canton 5, Ohio.

*Registered Trade Mark

UNION METAL
Material Handling Equipment

D on enclosed inquiry slip ▲

BUSS Low-Peak Fuses fit standard Switches and Panelboards—are available in N.E.C. sizes from 15 to 600 amps. sizes in both 250 and 600 volt ranges.

Write now for BUSS Low-Peak bulletin.

BUSSMANN MFG. DIVISION
McGraw-Edison Co.
University at Jefferson, St. Louis 7, Mo.

D on enclosed inquiry slip ▲

SKF *Distributor carries a full line of bearings*

He can give you immediate delivery of almost any bearing—because he carries all types in countless sizes in his local stocks.

And if he should be "out," there's a nearby SKF regional warehouse that is completely stocked to back him up. So, why not consider his full line as your inventory and call him first? 5907

EVERY TYPE—EVERY USE
SKF®
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

*REG. U. S. PAT. OFF.

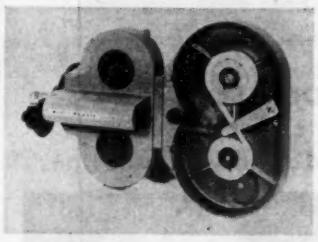
D on enclosed inquiry slip ▲

POCKET-SIZE PAGER
system contacts one or all units

Confidential communication with one or more individuals in any type of building or adjacent grounds is possible with the Electropage pocket-size paging unit. System is installed without tearing into walls or hanging wires. Each key individual carries an 8-oz 4¾ x 2¾ x 1-in. miniaturized receiver. Operator at a supervisory control center places all calls. Up to 500 channels are available. Emergency calls may be made to all receivers. Automatic action, transistorized receivers are powered by silver-cadmium batteries with a 3-year service life. Rubber cushioning protects them against jar or fall. Cost per channel is $230, including installation. • **United States Communications, Inc.**, 20 Madison Ave., Hicksville, L. I., N. Y.

▲ For more details circle **NED-560 D** on enclosed inquiry slip ▲

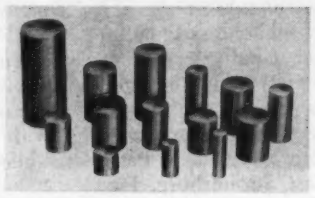
RAPID FILM PROCESSOR
develops movie film in camera



Less than 60 sec after exposure are required by Rapromatic processing to develop movie film for projection. Film with oscillographic or instrument data, or industrial sequences is developed in the magazine-processor which attaches to the camera (see photo). Exposed film or photographic paper and Raproroll paper web saturated with photochemicals are pressed together during processing. The chemically pre-saturated paper develops and fixes film automatically upon contact. Film is developed with good image quality, maximum contrast, and resolution retention at all film speeds. Rapromatic processing is available on a production basis for 16-mm film negative processing. • **Specialties, Inc.**, Skunks Misery Road, Syosset, L. I., N. Y.

▲ For more details circle **NED-561 D** on enclosed inquiry slip ▲

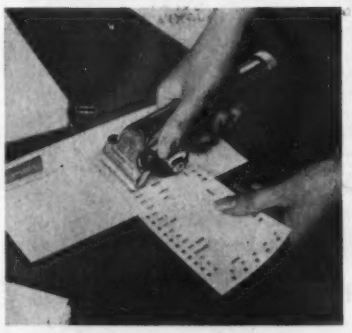
ROUND DRAWN CASES
available in various metals



Over 200 standard sizes of round drawn cases are designed to house electronic components. They are made from aluminum, copper, steel, brass, and mu metal in diameters from ½ to 3 in. and lengths up to 4 in. Modifications include cover stops, spade bolts, and all types of plating. Intermediate sizes and special lengths can be obtained. Prices range from 15 to 30 cents for steel cans in 1 to 99 quantities. • **Olympic Products Co.**, Third Avenue, Alpha, N. J.

▲ For more details circle **NED-562 D** on enclosed inquiry slip ▲

HAND ADDRESSER
uses typed or written master



Almost any type of card may be used as a master for the Scriptomatic Model 4 hand addresser. It is offered in a kit with 3 x 5-in. master cards and a supply of carbon hinges. Name, address, and other data is typed in normal fashion on these or other cards with the carbon hinge depositing a chemical impression on the reverse side. A ball point pen can also be used. Passing the wick of the addresser over the surface to be addressed, leaves an area moistened with spirit duplicating fluid from the unit's barrel. Master card is placed on this area and light roller pressure transfers the data from the carbon deposit. Kit with 25 cards and carbons sells for $32.90. • **Scriptomatic, Inc.**, 11th & Vine Streets, Philadelphia 7, Pa.

▲ For more details circle **NED-563 D** on enclosed inquiry slip ▲

SERVICE FOR YOUR B&D TOOLS

Check the Yellow Pages under "Tools-Electric" for the location of the nearest Black & Decker factory service branch or authorized service station.

Free tool inspection when requested • Genuine B&D parts used • Factory-trained technicians • Standard B&D Guarantee at completion of recommended repairs • Fast service, reasonable cost, always.

Or write for address of nearest of more than 50 branches and service stations to: THE BLACK & DECKER MFG. CO., Dept. 1904-S, Towson 4, Md.

Black & Decker

QUALITY TOOL SERVICE

▲ For more details circle **NED-564 D** on enclosed inquiry slip ▲

FOR HEAVY-DUTY SERVICE!

2 ADDITIONAL **"SPEEDYSTEAM"** Steam-Jet Cleaners

THE "300" AND "400" SERIES

With these exclusive features for more cleaning at low cost!

- Fully automatic ignition—no stoop, no matches
- Uniform, modulated steam pressure
- Built-in soap system and low water shut-off
- Complete with all accessories

Write for bulletin. PANTEX also builds famous "Speedy-lectric" electric steam generators and steam-jet cleaners.

PANTEX MANUFACTURING CORPORATION
P. O. Box 660 Z, PAWTUCKET 4, R. I. 0-093

▲ For more details circle **NED-565 D** on enclosed inquiry slip ▲

FOR THE BIG SHAKE*
"World's Quietest Vibrators"

hopper cars
massive bunkers
large bins
silos
chutes
shake-outs

MOVES, FEEDS, SIFTS
sand
clay
coal
ore
other materials

VIBROLATOR®
VIBRATION INDUCERS

*VIBROLATOR CCVP-3000, the 6600-lb. impact vibrator — or one of its three smaller brothers — IS GUARANTEED TO DO YOUR JOB OR YOUR MONEY BACK.

Order from your distributor today, or write for complete catalog.

MARTIN ENGINEERING COMPANY
Largest Producer of Rotary Vibrators
155 Nedlow Street, Neponset, Illinois

® VIBROLATOR is Martin Engineering's registered trade mark for vibration inducers and vibrator accessories.

▲ For more details circle **NED-566 D** on enclosed inquiry slip ▲

SEALED FOR SERVICE

RBC® PITCHLIGN® ROLLER BEARINGS with SEALS

Why sacrifice bearing performance under conditions that require protection from foreign elements.

The same dependable performance of the RBC PITCHLIGN is yours with the added protection of molded synthetic rubber seals. Available in a standard series of Sealed Pitchlign Roller Bearings.

Positive seats provided by shoulders separate seals from all revolving parts. Permits free, no bind roller-cage operation for top efficiency.

Seals can be mounted for retention of lubricant or exclusion of foreign matter.

More details?...Write for Bulletin SF-82.

RBC ROLLER BEARING COMPANY OF AMERICA
Sullivan Way • West Trenton, N. J.

▲ For more details circle NED-567 D on enclosed inquiry slip ▲

NEW PINES HIGH PRODUCTION END FINISHER

for
- TUBE
- ROD
- PIPE

New Model 660 Speeds Chamfering • Deburring • Facing • Drilling • Reaming • Tube-End Forming

- Rugged new design for high production, easy operation, faster feeds on simultaneous inside-outside deburring, chamfering, facing.
- New rigid, unitized spindle frame and heavier base retains close concentricity between the tool holder and chuck jaws.
- Simplified setup, operation, maintenance . . . one-minute speed changes with new hinged safety guard and pivoted motor mount.
- Production to 800 ends an hour . . . capacity to 2" O.D. . . . air operation, larger units or special machines are also available.

Write for catalog giving cost cutting features, production data, complete specifications.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery
641 WALNUT • AURORA, ILLINOIS

▲ For more details circle NED-568 D on enclosed inquiry slip ▲

NEW JUNIOR SIZE VIBRA-WASHER

GIVES YOU AUTOMATIC PROCESSING OF METAL PARTS

LABOR SAVING
READILY ADAPTABLE TO MANY OPERATIONS
NO NESTING OF PARTS DURING CLEANING OR CONDITIONING CYCLE
ADJUSTABLE CAPACITIES
ELECTRIC—GAS—STEAM HEATING ELEMENTS

The new Simplicity Junior Size Vibra-Washer employs a vibrating work carrier that automatically conveys metal parts through a cleaning or conditioning bath. It cleans so thoroughly that chips, oil and grease are removed from even blind or slotted openings; cleans so gently even the most delicate threads or flanges are not harmed.

If you have a tough cleaning or conditioning job, Simplicity Engineering Company can help. For information, write or call the Industrial Washer Division.

223

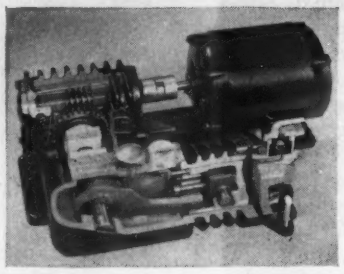
Visit our display ASTE Detroit Tool Show Booth 2215

Simplicity TRADE MARK REGISTERED
ENGINEERING COMPANY • DURAND 15, MICH.

FOR CANADA: Simplicity Materials Handling Limited, Guelph, Ontario

▲ For more details circle NED-569 D on enclosed inquiry slip ▲

METERING PUMP
sealed, variable discharge unit handles slurries, viscous liquids

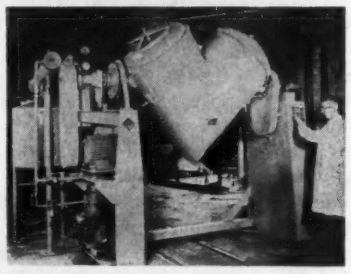


Capacities ranging from 0 to a maximum of 10, 18, 36, or 54 gph, and pressures up to 300 psi, are available in the Metriflow metering pump for handling slurries and viscous liquids of all kinds. Duplex models double these capacities without increasing motor size by staggering power strokes of two pistons. Gear case and pump body are flanged together, and sealed against moisture and dirt. All moving parts run in oil.

Standard diaphragm is neoprene, reinforced with four layers of woven nylon cord molded inside. Kel-F, Hy-Car, gum rubber, and other diaphragm materials can be furnished. Heads of stainless steel, Hastelloy, plastics, and other materials are interchangeable for conversion to different services. Discharge is adjusted by a lever which changes piston movement. Pump capacity is shown at all times. • **Madden Corp.**, 1345 Jarvis St., Chicago, Ill.

▲ For more details circle NED-570 D on enclosed inquiry slip ▲

LIQUID-SOLIDS PROCESSOR
in 1 to 50-cu ft capacities, blends and dries liquid-solids formulations



Liquid - to - solids blending and vacuum drying are functions combined in this packaged processing unit which incorporates the Twin-Shell V-shaped cylindrical shell. Hollow cylindrical dispersion bar, mounted across the blender axis, introduces water, oil, air, steam, or gas to the preblended mass. Wrap-around heat jacket, vapor take-off connection, filters, condensers, receivers, vacuum pump, and instrumentation are standard.

Processor gently tumble-blends under atmospheric conditions, vacuum, gas, or temperatures to 200° F; blends intensively, as with pigments; distributes liquids in solids; disperses liquids or blends solids under vacuum; conducts reactions; vacuum dries or sterilizes materials; coats or lubricates solids; or dries materials to desired percentage of moisture. Completely packaged systems are available with charge capacities from 1 to 50 cu ft. • **Patterson-Kelley Co.**, 392 Warren St., East Stroudsburg, Pa.

▲ For more details circle NED-571 D on enclosed inquiry slip ▲

PIPE & CONDUIT TRACER
uses tuned circuits to locate, trace, and triangulate underground piping

Transistorized, portable Tuned Circuit Tracer will locate, trace, and triangulate underground pipes anywhere, even those running parallel to power lines. A ground stake and the pipe to be traced are connected to the lightweight transmitter unit which is tuned to the highest signal. Transistorized, shirt - pocket receiver is tuned to the same audio frequency. Tracing can take place at a fast walk and signal volume in headphones remains at high level, even miles from transmission point.

Field coil stop-locks in 90-degree position for pinpoint location of pipe by means of audio null; in 45-degree position for determining depth by triangulation; and in 180-degree (parallel to ground) position for locating pipe without tracing from the transmitter source. Tracer is supplied with high-impedance headphones, although Liquid-Seal headphones are optional. These will cancel out 40 db of extraneous noise. • **Sharpe Instruments, Ltd.**, 6080 Yonge St., Willowdale, Ont., Canada.

▲ For more details circle NED-572 D on enclosed inquiry slip ▲

WIDEST CHOICE . . . FINEST QUALITY!

ALEMITE Lubrication Fittings...

for every industry, every application!

Full range of types and sizes. Alemite can supply you with any fitting—from the original "Pin Type" to newest "Red Ball" Hydraulic Fitting. Also many special fittings, such as Relief Fittings, Measuring Fittings and Drive Fittings. If your specific requirements cannot be met with a standard Alemite fitting, a quantity run can be made exactly to your specifications.

Write for FREE Alemite Catalog! Each fitting illustrated actual size—complete with individual dimensions.

Symbol of SW Excellence — ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. HH-40, 1850 Diversey Parkway, Chicago 14, Illinois

▲ For more details circle NED-573 D on enclosed inquiry slip ▲

NEW TOWNSEND VERSA-LOCKBOLT

Lower Fastener Cost—Wider Grip Range

The Townsend Versa-Lockbolt* is a new, improved design which is more economical and versatile than the standard type. They cost less to make and the savings are passed along to you.

The Versa-Lockbolt has the same high tensile preload values but a wider grip range which is provided by additional locking grooves. This grip range makes possible a reduction in inventory.

The new integral washer collars make Versa-Lockbolts especially suitable for fastening even light gage material.

For more information on the new Versa-Lockbolt, write Townsend Company, Engineered Fasteners Division, P. O. Box 71-G, Ellwood City, Pa.

*Licensed under Huck patents RE 22,792; 2,114,493; 2,527,307; 2,531,048; 2,531,049 and 2,754,703

▲ For more details circle NED-574 D on enclosed inquiry slip ▲

BIMBA

NEW low priced STAINLESS STEEL AIR CYLINDERS

No. 091
(1" stroke)

BIMBA

$5.45

Write For Latest Catalog and Name Of Nearest Distributor.

• 1 1/16" bore • single acting • stainless steel heavy wall tubing type 304 • exclusive BIMBA rolled edge construction • "U" cup piston seals • front nose mounting

BIMBA MANUFACTURING CO.
103 MAIN STREET MONEE, ILLINOIS

▲ For more details circle NED-575 D on enclosed inquiry slip ▲

New "400 SERIES"

ZERO-MAX Stepless Variable Speed

Zero-Max "400 Series", a redesign of the complete line, gives you stepless variable speed control with a finger's touch. Over 250 fractional horsepower models and types (1/15 hp thru 3/4 hp) with or without motors, reverse or gearhead — output range from zero to 1200 rpm with 1800 rpm input. Zero-Max gives smooth, stable drive and constant torque from 2½ to 450 inch-pounds.

Change speeds instantly, running or not. Truly stepless — zero to maximum. Lever, screw, vernier or remote control. Lever control provides fast yet precise control. Instant reverse and neutral.

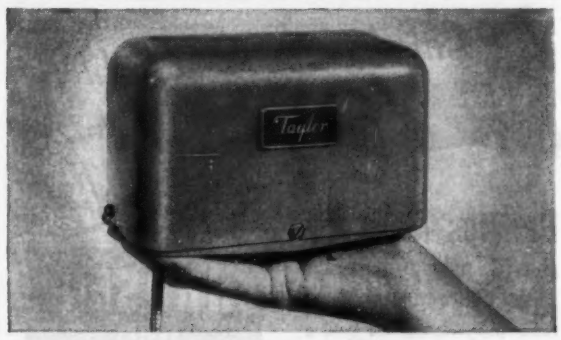
Send for free catalog on the new Zero-Max "400 Series" and name of your nearest representative.

THE ZERO-MAX® COMPANY

Subsidiary of REVCO, INC.

1910 Lyndale Ave. So., Minneapolis 5, Minn., FR 4-5520

▲ For more details circle NED-576 D on enclosed inquiry slip ▲



ACCURATE TEMPERATURE MEASUREMENT AT LOW COST

The Taylor SENSAIRE* Pneumatic Transmitter sends a signal to an indicating or recording receiver. Operates within limits of minus 30°F. to plus 1200°F. with simplified adjustments, excellent repeatability and unusually fast response. Available in range spans of 50°F., 100°F., 200°F., and 400°F.

Sturdy, compact, force-balance, with mercury-filled thermal system, the SENSAIRE Transmitter is temperature compensated. Factory calibrated accuracy is well within 1% of rated range below 550°F.; 1½% above 550°F.

Write for SENSAIRE **Bulletin 98293.** Taylor Instrument Companies, Rochester, N.Y., or Toronto, Ont.

*Trade-Mark

Taylor Instruments MEAN ACCURACY FIRST

▲ For more details circle NED-577 D on enclosed inquiry slip ▲

Announcing

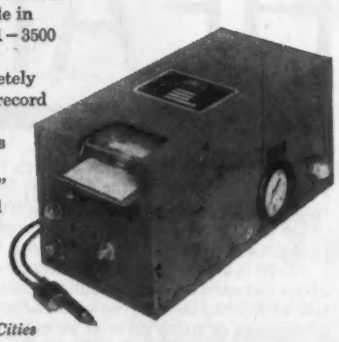
an important new development for quality control measurement

AMES MODEL AG7

Accu-Flow* Air Gage Recorder

A permanent record of continuous measurements can be made in magnifications of 1750 to 1 — 3500 to 1 — and 17,500 to 1.

The AG7 provides a completely impersonal measurement record that can be used both as a controlling device and as a means of furnishing visible "proof of precision" to buyers of the measured products. Send for free ACCU-FLOW folder.



*Trademark of B. C. Ames Co.

Representatives in Principal Cities

B.C. AMES CO.

34 Ames Street, Waltham 54, Mass.

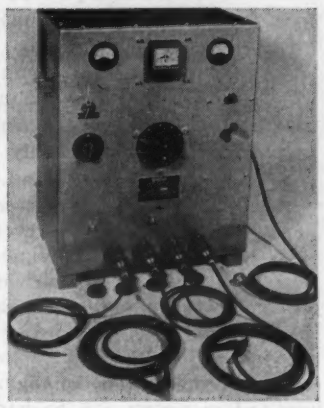
Canadian Representative—H. C. Burton Co. Ltd., Hamilton

MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAGES

BOOTH 714 ASTE TOOL SHOW — Detroit — April 21-28

▲ For more details circle NED-578 D on enclosed inquiry slip ▲

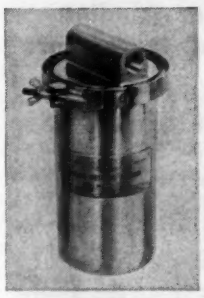
PLATING POWER PACK
for on-the-job Dalic process



Two positive leads with plugs and two negative leads with clamps permit simultaneous plating and etching operations on two workpieces with the portable Dalic power pack. The 200-v, single-phase, 60-cycle unit has an output of 0 to 50 amp at 0 to 30 v with stepless voltage control. Meter has 0.01 amp-hr divisions. Dalic process deposits any of a variety of metals from antimony to zinc on many base metals without tank immersion. Selected work areas may be plated without extensive masking. • **Sifco Metachemical, Inc.**, 935 E. 63rd St., Cleveland 3, Ohio.

▲ For more details circle NED-579 D on enclosed inquiry slip ▲

FLUID FILTER
various elements, metals offered



Element of this fluid filter can be removed and cleaned without contaminating pipe lines to which it is connected. Simple clamp closure permits rapid removal and replacement of the body tube. Offered in several pipe sizes, it has a porous metal element which is used with or without a filter aid. Elements may be supplied as cylinders, bayonets, stars, or in special types such as Rigimesh corrugated sintered woven wire mesh. Available materials include stainless steel (standard), Monel, nickel, Inconel, and others. Filter can be designed to withstand up to 10,000 psi; 125 or 300 psi is standard, with filtration to as low as 2 microns nominal. • **Pall Corp.**, Micro Metallic Div., 30 Sea Cliff Ave., Glen Cove, N. Y.

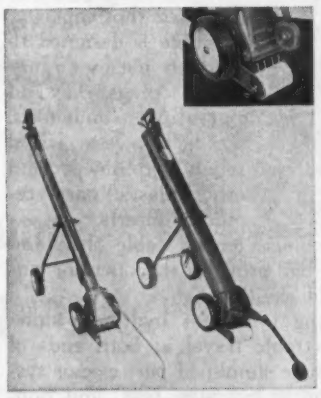
▲ For more details circle NED-580 D on enclosed inquiry slip ▲

SAND BLASTING GUN
has high power and trigger control

Trigger control and doubled power are advantages given to the Model B Sandy Jet sand blaster by improved trigger-grip gun. Three interchangeable nozzles adapt equipment to use practically any abrasive materials, including silica sand, nut shells, metal shot, or aluminum oxide to clean, deburr, or finish plastics, glass, metal, wood, or masonry. Rust, paint, chemicals, and foreign matter are readily removed, even from nearly inaccessible areas. Cleaned surfaces afford good bond for subsequent finishes. Equipment, including safety face shield, operator's hood, two extra nozzles, and an extra air jet, lists for $39.95. • **ALC Co.**, R. D. 5, Box 40, Medina, Ohio.

▲ For more details circle NED-581 D on enclosed inquiry slip ▲

SAFETY LINE MARKERS
¾ and 2½-gal sizes now offered



Florline marking machines for making safety and parking lines are now available in ¾ and 2½-gal capacities. The ¾-gal unit priced at $84.50 renews lines for safety aisles, stock areas, and parking spaces in small plants and lots. The 2½-gal machine is priced at $149.50. Special Florline X model paints lines within ⅜ in. of aisleways, curbs, and walls, and is available in all sizes. Each size features a multiple feed and roller application. Line widths of 2, 3, and 4 in. are standard, with 5 and 6-in. widths available at slight extra cost. • **H. C. Sweet Co.**, 56861 Grand River, New Hudson, Mich.

▲ For more details circle NED-582 D on enclosed inquiry slip ▲

FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

▲ For more details circle NED-583 D on enclosed inquiry slip ▲

Replace with Colson Casters

Speed up work . . .
Eliminate breakdowns
Save floor damage

Send for new Colson catalog C101 . . . contains over 2000 job rated test proven money saving Casters.

Contact your local representative or distributor or write to

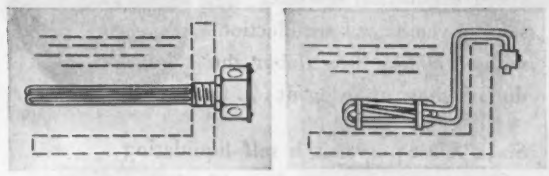
COLSON'S 75th YEAR OF PROGRESS

THE COLSON CORPORATION
7 S. Dearborn Street CHICAGO, ILLINOIS

▲ For more details circle NED-584 D on enclosed inquiry slip ▲

For fast heat, For clean heat . . .

Build heat into your product or process with General Electric immersion heaters



For heating liquids in your processing equipment or in your products no other method offers the cleanliness, speed and selectivity made possible by immersion heaters from General Electric.

You get all the heat: Because these heaters can be placed right in the liquid you get maximum efficiency. Heat losses to surrounding atmosphere are reduced. Working conditions are more comfortable.

Fire hazards reduced: Safer, quicker electric heat eliminates danger of open flame, inconvenience of smoke and fumes.

You get accurate control: To give you quick heat regulation for changing conditions, precise thermostat controls are available.

FREE BULLETINS

For more information, write Section 723-30, General Electric Company, Schenectady 5, N. Y., and ask for GEA-6305, HEATING WATER AND PLATING BATHS; GEA-6306, HEATING OIL; and GEC-1005 CATALOG OF GENERAL ELECTRIC HEATERS AND DEVICES.

GENERAL ELECTRIC

▲ For more details circle NED-585 D on enclosed inquiry slip ▲

WORM GEARS

NEW BULLETIN CD-700-C free to design engineers

Details of hundreds of matched sets of double-enveloping worm gears. Capacities from fractional to over 1600 hp. Drawings, charts and photos illustrate 16-page booklet.

CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan

▲ For more details circle NED-586 D on enclosed inquiry slip ▲

PARTS FEEDING BY AUTOMATION

...feeds dollars into your profit column

In costing today's high speed production it makes sense if you increase production without adding direct labor, the dollars show up in profit . . . fast!

Since AD equipment is self liquidating with labor savings it also adds dollars in earnings all along the line.

Let any one of AUTOMATION DEVICES' sales engineers, located throughout the country, help you streamline your production facilities and you'll add dollars to your profit.

Send for informative literature and the name of nearest AD representative.

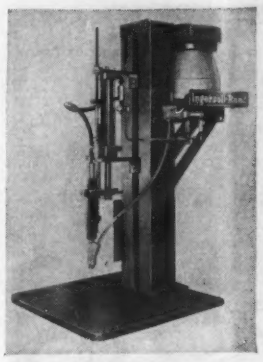
*60

PERCO & VFC DIVISIONS
...TWO GREAT NAMES IN PARTS FEEDING

AUTOMATION DEVICES INC.
ERIE, PENNSYLVANIA

▲ For more details circle NED-587 D on enclosed inquiry slip ▲

AUTOMATIC SCREWDRIVER runs screws in 1½ sec to set torque



Quick changes to practically any screw pattern are accomplished on the R-A-F automatic screwdriver by loosening and tightening only two bolts per powerhead. Screws are driven in ½ sec. In each of three power ranges the Multi-Vane air motors run to stall, driving screws to a preset, accurate torque. Easily added or moved powerheads can be located as close as 2 in. center-to-center. Most common screw types and many hard-to-feed screws can be handled. Standard vibratory or barrel feeders feed up to four powerheads each. Standard base is 24 x 24 in., but larger ones can be furnished for mounting larger fixtures. Throat depth ranges from 8 5/32 to 14 in. Powerhead stroke is adjustable up to 6 in. • **Ingersoll-Rand Co.**, Phillipsburg, N. J.

▲ For more details circle NED-588 D on enclosed inquiry slip ▲

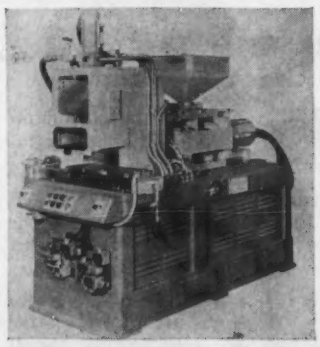
NUMERICAL CONTROL SYSTEM controls turning, boring, grinding machines in 0.000025-in. increments

This two-axis numerical control system for precision turning, boring, and grinding contouring machine tools provides a command pulse to each machine slide of 0.000025 in., or 40,000 pulses per inch of slide travel. On routine production of templates, tolerance of 0.0001 in. is held, whereas 0.0002-in. tolerance is held in contour boring and turning operations. High speed reader for punched tape input reads 300 lines per second in forward direction and 600 lines per second in reverse direction.

Automatic tape rewind and two decimal display position indicators with continuous readout are among features. Auxiliary tape control functions are available to control coolant flow, spindle speed, and grinding wheel dressing. Feed rate override allows reduction of feed rate to as little as 20 per cent of programmed rate to accommodate such variables as cutter quality, material hardness, and vibration. A too-high programmed rate can thus be taken into account without need for remaking the control tape. • **Bendix Aviation Corp.**, Industrial Controls Section, 21820 Wyoming Ave., Detroit 37, Mich.

▲ For more details circle NED-589 D on enclosed inquiry slip ▲

PLASTIC MOLDING MACHINE with 4 to 6-oz shot capacity for plastic parts requiring inserts



Only one operator is required for the Model 12 Duplimatic plastic molding machine with 4 to 6-oz shot capacity. Machine is designed to produce heavy duty cord plugs, axial switches, condensers, wiring harnesses, strain reliefs, grommets, and other plastic parts requiring inserts. An extended table shift and elimination of center tie-bar provides the operator unobstructed access to mold cavities.

The two-station shifting table has hydraulic slowdown device, to cushion table travel at both ends of the stroke. Features include simplified part ejector system; unitized construction of cylinder, feed, and hopper assembly; high capacity spreader-type cylinder, tubular cylinder heaters, and self-compensating feed mechanism which includes a 75-lb capacity aluminum hopper. • **Moslo Machinery Co.**, 2501 Prospect Ave., Cleveland 15, Ohio.

▲ For more details circle NED-590 D on enclosed inquiry slip ▲

▲ For more details circle NED-591 D on enclosed inquiry slip ▲

Handles More Air
...with minimum pressure drop

Fewer parts...simplified locking ring provides positive lock... tight fit...minimum wear.

⅛" to ¾" connections. All Series 2-RL Sockets and Plugs are interchangeable – likewise all Series 3-RL Sockets and Plugs. Eliminates any need for various size couplings in hook-up – makes it easy to keep stock of parts in balance – holds inventories to a minimum.

HANSEN SERIES RL QUICK-CONNECTIVE RING LOCK COUPLING

Write for Catalog – a ready reference when you want information on couplings in a hurry.

Instant Automatic Flow or Shut-Off

Representatives in Principal Cities ...See Yellow Pages

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

▲ For more details circle NED-592 D on enclosed inquiry slip ▲

NEW BOOK ON INDUSTRIAL RADIANT HEAT

Do you know the difference between infrared and *far* infrared radiant heating? Why the latter is 90% efficient, practically twice the efficiency of straight infrared?

Do you know that *far* infrared is color blind . . . that it heats or dries a red surface as readily as a white or black?

PE-70 is a new book that answers these and similar questions about industrial radiant heating. It details the theory and practice of heating and drying with radiant energy, tells the many advantages of using glass as an energy source, gives specifications on VYCOR® Tubular Heaters and PYREX® Panel Heaters.

Write for a copy to Plant Equipment Sales Department, 56 Crystal Street, Corning, N. Y.

CORNING GLASS WORKS
CORNING MEANS RESEARCH IN GLASS

▲ For more details circle NED-593 D on enclosed inquiry slip ▲

OUTSTANDING HAND PROTECTION

CHARCO MILLED NEOPRENE RUBBER AND BUNA N SYNTHETIC RUBBER

"NEO-SOL" All-Neoprene industrial protective gloves offer dependable protection from most industrial chemicals and solvents, and have excellent snag resistant qualities.

"HY-SOL" Buna N Synthetic Rubber gloves offer premium protection against, and outstanding resistance to, organic solvents and industrial chemicals.

CHARCO'S PROTECTIVE GLOVES FOR INDUSTRIAL USE ARE NOT LATEX-TYPE GLOVES, THEY ARE MILLED MULTIPLE-DIP CEMENT-TYPE GLOVES WHICH OFFER LONGER, SAFER SERVICE.

CHARLESTON RUBBER COMPANY
18 STARK INDUSTRIAL PARK — CHARLESTON, S.C.

▲ For more details circle NED-594 D on enclosed inquiry slip ▲

TYGON®

means longer lasting protection against acid or alkali attack

If acid or alkali fumes make maintenance painting a never-ending headache, it's time to switch to Tygon. For more than twenty years, these famous specialty coatings have been protecting chemical plants everywhere. Resist acids, alkalies, alcohol, oils, greases. Apply by spray or brush. Air dries quickly.

164-G

Write for this Manual

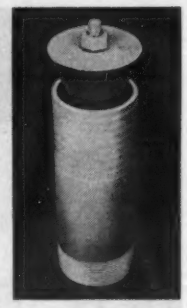
Bulletin 760 tells where and how to use Tygon.

Plastics & Synthetics Division

U. S. STONEWARE
AKRON 9, OHIO

▲ For more details circle NED-595 D on enclosed inquiry slip ▲

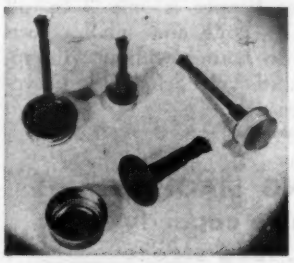
SPRAY NOZZLES
spray pattern is adjustable



Spray height and appearance can be altered with No. 666 spray nozzles which provide mushroom shaped or hollow-cone spray patterns. Nozzle consists of a body center pipe and adjustable plug. Water discharges in a hollow-cone sheet which breaks into a spray at a height determined by plug adjustment and water pressure. Nozzles are supplied in 2, 4, and 6-in. sizes with choice of spray angles. • **Schutte & Koerting Co.,** Dept. JA-24, Cornwells Heights, Bucks County, Pa.

▲ For more details circle NED-597 D on enclosed inquiry slip ▲

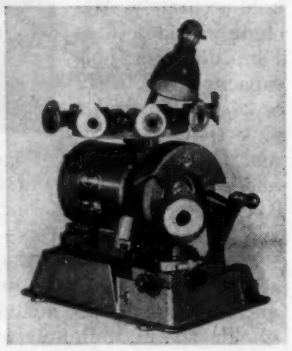
APPLICATOR CAN TOPS
in brush or swab types



Consisting of a brush or swab applicator with a polyethylene shank assembled in a metal cap, this Henlopen cap assembly has an integral flange which assures airtight closure to prevent leakage. Applicator is unaffected by most liquids, and seal stops corrosion of cap. These low cost cap assemblies are available in a wide range of sizes, colors, and swab or brush designs. • **Henlopen Mfg. Co.,** Dept. P, 178 Cook St., Brooklyn, N. Y.

▲ For more details circle NED-598 D on enclosed inquiry slip ▲

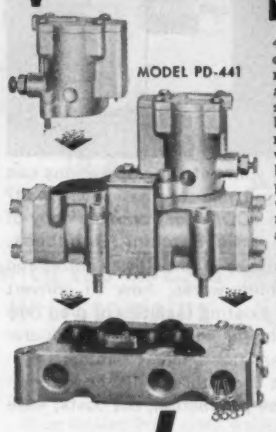
DRILL GRINDER
has turret type drill locator



Drills can be positioned for grinding at any point on the face of the Black Diamond drill grinder wheel, minimizing wheel wear at one point and extending wheel life. Stand with an etched plate is marked in 1-degree increments and is mounted on a dovetail slide. A turret type quadrant swings the desired drill locator in direct line with the grinder's swinging arm. Diamond wheel dressers are presented to the grinding wheel at a 15-degree angle for sharpening. Periphery of the wheel is dressed at a 5-degree angle, assuring sharp wheel edges for web thinning. Mist cooling and a desk height, four-drawer, knee-hole cabinet are optional. • **Edward Blake Co.,** 570 Pleasant St., Watertown 72, Mass.

▲ For more details circle NED-599 D on enclosed inquiry slip ▲

Valvair® ½" NPT PLUG-IN VALVES



4-way single or double pilot-operated types, for sub-base or manifold mounting. Aluminum and stainless steel components assure multi-million cycle dependability . . . short-stroke design speeds response. Interchangeable pilots, with coils guaranteed against burn-out for life of valve, fit any plug-in Speed King. Separate coded (4-wire) circuits on double solenoid models. Coils for ac or dc, any voltage . . . 35 — 200 psi range . . . integral junction box . . . optional manual over-ride, common or separate exhaust ports, sub-base connected external pilot supply . . . ¾ in. exhaust port, ½ or ¾ in. inlet and cylinder ports . . . flow area through valve and sub-base equals full ½ in. pipe . . . valve meets JIC standards.

For more information, write for Bulletin SPL. Address Dept. NED-460, Valvair Corp., Akron 11, Ohio.

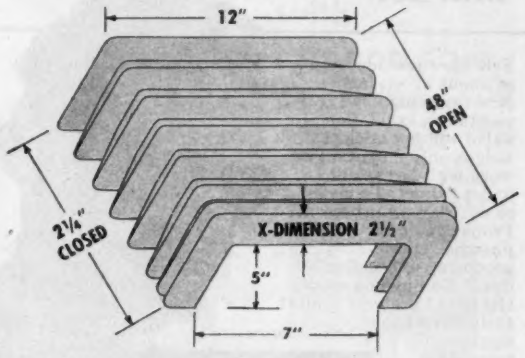
Valvair AKRON 11, OHIO
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)
Other INDUSTRIAL DIVISIONS of IBEC: The Sinclair-Collins Valve Co. The Bellows Co., Akron, Ohio • V. D. Anderson Co., Cleveland, Ohio.

S100

▲ For more details circle NED-600 D on enclosed inquiry slip ▲

PROTECTED NEW GORTITE

FOR WAYS AND CROSS RAILS FABRICATED FROM NEOPRENE

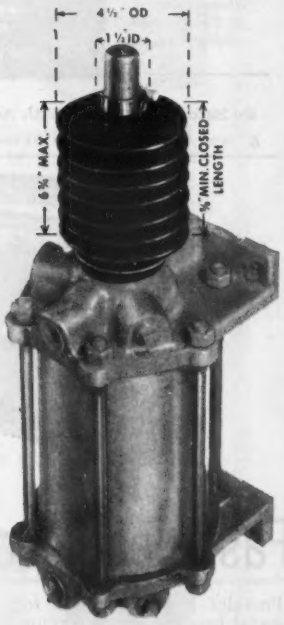


the 2½" dimension determined the small, 2¼" closed length. Variations in this "X" dimension govern the closed lengths.

WAY-PROTECTORS
high maximums low minimums

SLEEVES
1 or 1000 without molds

BOOTS
for dirt exclusion and lubricant retention



ALL SHAPES AND CONTOURS

ALL GORTITE protection is fabricated from a neoprene-base material which is impervious to oil, grease, dust, dirt, sand, chemicals and abrasives. Protectors will flex at temperatures ranging from —40° F., to 220° F., without cracking. Ask for bulletin AH-3.

A&A MFG. COMPANY INC.
712 S. 12th Street Milwaukee 4, Wisconsin

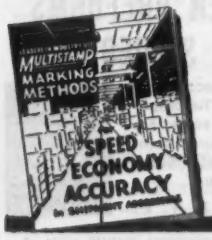
▲ For more details circle NED-601 D on enclosed inquiry slip ▲

With "Ship To" frame pre-printed by carton maker, shipping clerk uses Multistamp Duplicator to address up to 1000 pieces of the same shipment with the same low-cost stencil . . identically, accurately, quickly, easily.

Multistamp® Stencil Addressing System

Quickest Way for Volume Shipping

Using Multistamp FORM-CUT stencil, printing the form and fill-in data at the same time is an easy, one man—one hand—operation. Your form is custom die-cut in the stencils . . you fill them in with ball point pen or typewriter.



VOLUME-PAK Stencils
both plain and FORM-CUT save big money for quantity users. One-day service on repeat FORM-CUT stencil orders . . less than 10 days on new orders.

Write Today for your Free copy of the illustrated new how-to- (and why) book about the MULTISTAMP Marking Methods.

MULTISTAMP®
STENCIL DUPLICATOR
THE MULTISTAMP CO. NORFOLK, VA.

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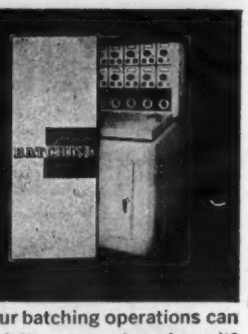
AUTOMATIC BATCHING HANDBOOK



NOW your batching operations can become fully automatic—why wait? Write TODAY for your free copy of Automatic Batching Handbook.

- WHAT YOU NEED
- HOW TO USE WHAT YOU HAVE
- HOW TO SELECT THE RIGHT SYSTEM

Describes in detail how automatic batching works, how to convert your existing facilities or plan new plants for fully automatic operations. Shows latest batching systems available; tells how to increase production, cut costs, save time.

WRITE for your free copy **TODAY!**

HOWE

THE HOWE SCALE COMPANY, INC.
RUTLAND, VERMONT
A SUBSIDIARY OF AMERICAN MANUFACTURING COMPANY, INC.
HOWE SCALES OF CANADA, MONTREAL, QUEBEC

▲ For more details circle **NED-605 D** on enclosed inquiry slip ▲

For Hot Weather Comfort Workers Wear the Lightest Bur. of Mines-Approved Dust Respirators on the Market!

Felt filter provides area of about 22 sq. inches. Non-reversing, low resistance, exhalation valve will not stick. Unit weighs only 2 oz. Can be worn with goggles or under helmet. To clean: shake, slap or airhose it. Protects against pneumoconiosis-producing and nuisance dusts. Companion model (R9100T) protects against toxic dusts not significantly more toxic than lead.

AO R9100 RESPIRATOR

Always insist on Trademarked Safety Products

American Optical COMPANY
SAFETY PRODUCTS DIVISION
SOUTHBRIDGE, MASSACHUSETTS
Safety Service Centers in Principal Cities

Be Safe For Sure . . . With AO SURE-GUARD Respirators

▲ For more details circle **NED-606 D** on enclosed inquiry slip ▲

JOHNSON
NO. 133
FORGE FURNACE
ONLY
$246.00
F.O.B. FACTORY

Fast, clean, economical heat

Provides high, fast heat for metal bending, metal forging, occasional heat treating, plowshare sharpening, metal forming and preheating. Clean, efficient, equipped with four burners, operates economically on any type of gas. Completely safe. Special solenoid safety valve turns gas off automatically when blowers are turned off. High temperature, insulated firebox, 5½" by 7½" by 27" gives maximum efficiency. Furnace has extending front bar to support long pieces or hold tools.

Two end burners have separate valves, may be turned off for smaller jobs. 100% safety shut-off and constant burning pilot optional. Maximum 400,000 BTU output.

Write today for free Johnson Catalog

if it burns gas look to *johnson*
Since 1901
JOHNSON GAS APPLIANCE CO., 501 E AVE. N.W., CEDAR RAPIDS, IOWA

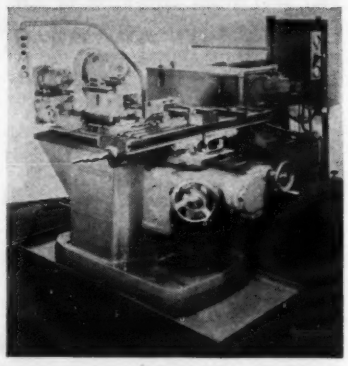
▲ For more details circle **NED-607 D** on enclosed inquiry slip ▲

INDUSTRIAL POWER SWEEPER features hydraulic drive system

Powered by an 18-hp gasoline - engine driven hydraulic power unit, Hydra-Sweep power sweeper is controlled by single pedal for forward, reverse, speed changes, and braking. It turns in a 53½-in. radius, and constant engine speed maintains constant broom speed. Side brush retracts up to 6 in. when it hits any obstacle. The hydraulic dump control empties hopper fully without hammering. Since hopper is only 3 in. off floor, machine will pick up large and small objects ranging from paper clips to bottles without "humping." • **Hydra-Action Co.**, 2032 W. Schaff Rd., Cleveland 9, Ohio.

▲ For more details circle **NED-608 D** on enclosed inquiry slip ▲

DEEP HOLE DRILLING MACHINE has ⅛ to 1-in. hole capacity with 12 or 24-in. feed stroke



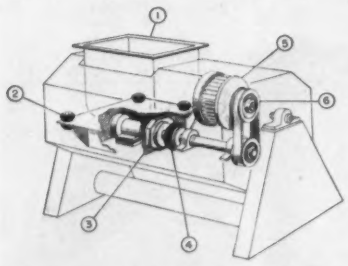
Rapid work-positioning and simplified tooling of this revolving drill type deep hole drilling machine eliminate need for expensive fixtures to locate hole accurately. Machine provides ⅛ to 1-in. diameter hole capacity with a 12 or 24-in. feed stroke, plus spindle speeds and feeds for a wide range of work. Rapid advance and return; vertical and longitudinal positioning to 0.001 in.; and 28-in. longitudinal, 12-in. transverse, and 12-in. vertical travels are also featured.

High pressure coolant unit delivers up to 30 gpm at up to 2000 psi with filtering capability of 5 to 10 microns. Optionals include a step pulley for three spindle speeds, infinitely variable speed drive, power travel in all directions, angular hole adapters, drill heads with mechanical feeds, and optics for vertical and longitudinal positioning within 0.0002 or 0.0003 in. • **Brown & Sharpe Mfg. Co.**, Machine Tool Div., Providence 1, R. I.

▲ For more details circle **NED-609 D** on enclosed inquiry slip ▲

VIBRATORY FINISHER has adjustable frequency for wide range of processing applications

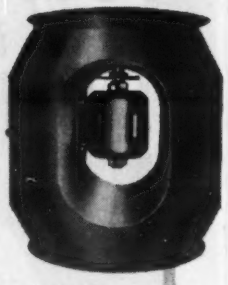
Vibratory amplitude of this Air Cushioned vibratory finishing machine is controlled by pneumatically interconnected air cushions, four above and four below the vibrating platform. Varying the air pressure regulates the amplitude. Air cushions can also be employed as floor mounts to prevent transmission of vibration to floors or structures. Machine is usable for cleaning, descaling, deburring, polishing, coloring, and burnishing products made of metal, plastics, and ceramics. Fast operation is assured because entire load is in constant motion. Large or heavy pieces can be fixture mounted for processing.



Vibration is generated by a short, heavy duty, eccentric shaft to which weights can be added or removed to change the vibratory amplitude. Variable pitch sheaves give a 2:1 frequency adjustment in range of 1000 to 2000 rpm. Infinite and automatic speed controls are optional. Capacities are 1½, 3, 6, 12, and 18 cu ft. Illustration shows: 1. Work container, 2. air cushion, 3. adjustable eccentric shaft, 4. annular coupling, 5. pancake induction motor, and 6. variable speed sheave. • **Pangborn Corp.**, Pangborn Boulevard, Hagerstown, Md.

▲ For more details circle **NED-610 D** on enclosed inquiry slip ▲

DRAFT TAILORED TO YOUR BOILER RATING



DeBothezat Induced Draft Bifurcator® Fans are *certified* to provide sufficient draft based on the boiler manufacturer's maximum rating and to handle the products of combustion. To meet your varying draft requirements, DeBothezat Fan speeds can be adjusted from full to half speed. Installed in breeching inside or in stack outside, fumes are bypassed around the motor chamber. Direct, motor-driven fan eliminates troublesome fan belts. Available for high pressure boilers delivering up to 60,000 lbs. of steam per hour and low pressure boilers delivering up to 190,000 EDR. Write Dept. NED-460 for detailed bulletin.

11-step controller for single phase motors. 9-step model for 3-phase motors also available.

De Bothezat® FANS
A DIVISION OF
American Machine and Metals, Inc.
EAST MOLINE, ILLINOIS

▲ For more details circle **NED-611 D** on enclosed inquiry slip ▲

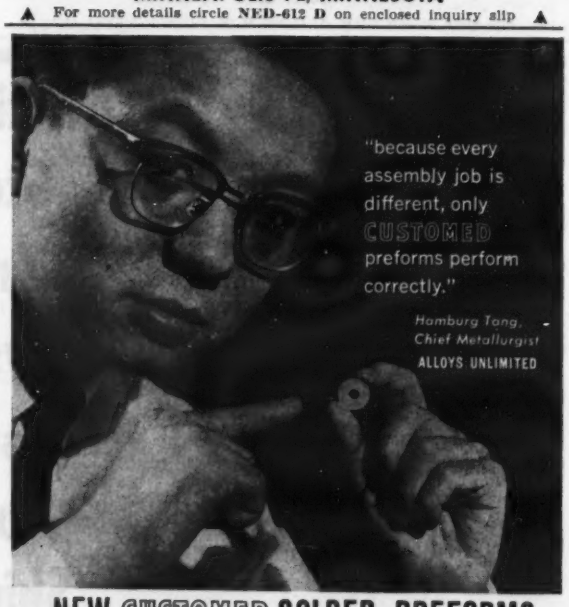
Malleable Casting Redesigned to Stamping Becomes Standard Equipment for Lathe Maker

This malleable cast spanner wrench, used for the handwheel draw-in attachment on a precision bench lathe, involved an elaborate set of patterns, two machining operations plus grinding and finishing. Converting to a die-cut stamping gave improved appearance, reduced weight and better quality. Lots of 100 cost no more than six previously handmade wrenches.

Bulletin F185 explains the highly efficient, specialized, D-R technique of utilizing temporary tooling to produce short-run stampings that cut the work load—and costs—of metal fabricators. Write for it. A print and/or sample, plus quantity, will bring a prompt quotation without obligation.

DAYTON ROGERS *Manufacturing Company*
MINNEAPOLIS 7E, MINNESOTA

▲ For more details circle **NED-612 D** on enclosed inquiry slip ▲



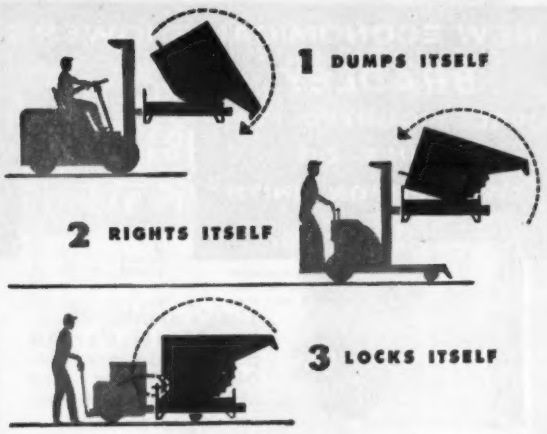
NEW CUSTOMED SOLDER PREFORMS IMPROVE AUTOMATIC SOLDERING

New customed preforms consist of an accurately predetermined amount of a specific alloy. The proper melting temperature and correct volume of solder are assured. Labor costs are lowered. Production increases. Scrap is eliminated. Get the facts today! Write for 8 page Guide to Preform Soldering.

21-01 43rd Ave., Long Island City 1, N. Y.

ALLOYS UNLIMITED INC

▲ For more details circle **NED-613 D** on enclosed inquiry slip ▲

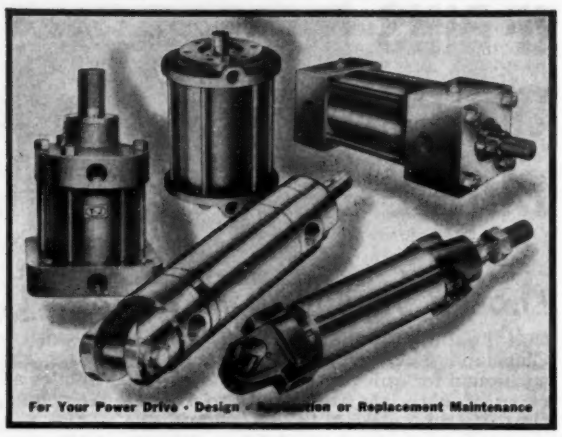


Cuts handling time...and costs...50%

Here's the fastest, lowest cost method ever devised for handling hot or cold, wet or dry bulk materials . . . scrap metal, hot forgings, cinders, soybean meal, etc. Fits any standard lift truck. One man picks up loaded Hopper with truck, transports it to destination, and flips the latch. The Hopper automatically dumps its load, rights itself, locks itself. Cuts costs 50%. Made of ⅛" steel plate with continuous arc-welded seams. Also in stainless steel or galvanized. Five sizes, ½ to 2 cubic yards. Standard models can be shipped from stock immediately. Literature and other information available on request. ROURA IRON WORKS, INC., 1415 Woodland Ave., Detroit 11, Mich.

ROURA Self-Dumping HOPPER

▲ For more details circle NED-614 D on enclosed inquiry slip ▲



There's a T-J CYLINDER

That Can Assure *Accurate Efficient Operation*

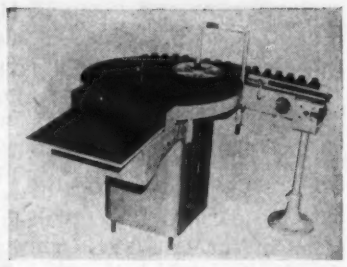
Only T-J's complete line can assure you a cylinder of either air or hydraulic application-with practically limitless design specifications for bore, stroke, pressure range and even delivery requirement. From the time-tested, standard tie-rod air and hydraulic, to the exclusive T-J Spacemaker, and including the recently introduced Squair Head, T-J cylinders give you more features for efficient, long-lasting operation. Write today!

Plus THE ONLY COMPLETE ENGINEERING CATALOG LINE, TOO!

THE TOMKINS-JOHNSON CO. JACKSON, MICH.
CYLINDERS • MILLING CUTTERS • RIVETERS and CLINCHERS

▲ For more details circle NED-615 D on enclosed inquiry slip ▲

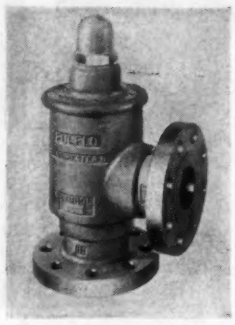
CONTAINER RIGHTING TABLE
lines up containers lengthwise



Floating wheel attachment for Styl-O-Matic rotary unscrambling tables provide lengthwise discharge of odd-size containers to the take-away conveyor. Attachment rotates opposite to disc rotation, kicking back one side of the straight-sided container. It is available for unscrambling tables now operating in the field. • **Island Equipment Corp.**, Box 380276, Miami 38, Fla.

▲ For more details circle NED-617 D on enclosed inquiry slip ▲

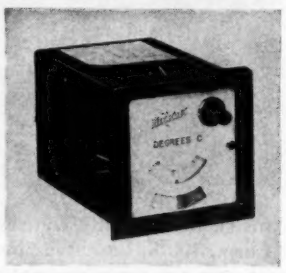
BY-PASS RELIEF VALVES
2½ and 3-in. sizes for oil service



Three flange type hydraulic system valves for adjustable bypass relief service have cast iron bodies and steel or stainless steel trim. Models LFC-9 and LFC-10 are 2½ and 3-in. sizes for 60 and 100-lb maximum control pressures, respectively. Model HFC-9 is a 2½-in. flange valve for 325-lb maximum pressure and uses a pilot type operation. Both 2½-in. valves have 300-lb standard flanges and the 3-in. valve has 600-lb flanges. All can be furnished with smooth face flanges or standard rabbet, drilled on or off center. • **Fulflo Specialties Co.**, 438 Fancy St., Blanchester, Ohio.

▲ For more details circle NED-618 D on enclosed inquiry slip ▲

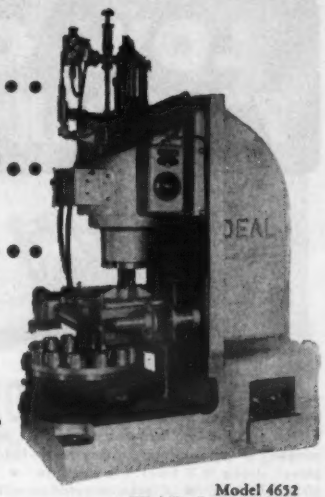
SWITCHING GALVANOMETER
has 1 microampere sensitivity



Full scale sensitivity as low as 1 microampere enables this switching galvanometer to function in temperature or other control systems where the energizing signal is too slight to energize conventional relays. Unit is suitable as a control instrument for chemical processing or where close control of temperature is critical. It utilizes the Hickok Taut-Band meter movement in which indicator pointer movement is controlled by magnets. Galvanometer energizes an auxiliary relay rated 50 w and can directly control a magnetic switch. • **Hickok Electrical Instrument Co.**, Dept. 105, 10514 Dupont Ave., Cleveland 8, Ohio.

▲ For more details circle NED-619 D on enclosed inquiry slip ▲

IMPRINT.. IMPRESS.. MARK.....



in any COLOR with the IDEAL Hot Stamping Press

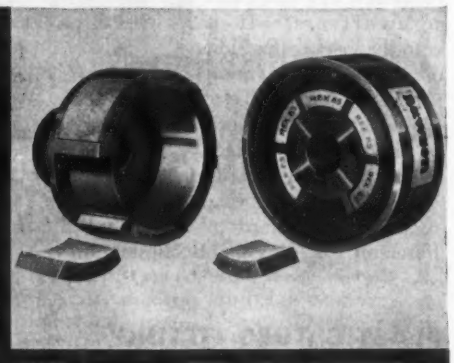
Model 4652
HRA Hot Stamping Press, equipped for use on plastic bottle caps.

It's IDEAL for use on rigid plastic bottles, plastic bottle caps, shoe insoles, brief cases, wallets, novelties, purses and many other items. Hot stamping head is available as a separate item for custom installations; adaptable for use on standard presses, air or hydraulic. Get HIGH performance at LOW cost. For prices and complete information, write today.

IDEAL STENCIL MACHINE CO.
134 Ideal Block • Belleville, Ill.

▲ For more details circle NED-620 D on enclosed inquiry slip ▲

NOW! YOU CAN USE SMALLER MOTORS... LOWER STARTING EQUIPMENT COSTS ...SECURE OVERLOAD PROTECTION WITH Rawson CENTRIFUGAL CLUTCHES



Rawson is an all-metal centrifugal clutch that drives in either direction and provides cushioned starting of equipment at predetermined R.P.M. It is of rugged design and available for applications up to 2000 horsepower.

Rawson "no-load" starting of motors permits across the line starting and smaller motors generally can be used. With Rawson cushioned starting of high-inertia loads, NEMA "B" or standard squirrel-cage motors can be selected instead of expensive special high-torque motors. Also, jamming or over-loading will cause a Rawson clutch to slip and provide automatic protection.

For your free copy of Rawson Catalog 141, contact your Rawson distributor or write direct.

- "No-Load" Starting of Motors
- Cushioned Starts for Equipment
- Durable All-Metal Shoes
- 100% Slip-Free Driving Power
- Effective Heat Dissipation
- Longer Service—Greater Capacity
- Can Be Furnished with Delayed Engagement for Standby or Dual Drive

FORMSPRAG COMPANY
23595 HOOVER ROAD, DEPT. 109 • WARREN (DETROIT), MICHIGAN
Precision Power Transmission Products

▲ For more details circle NED-616 D on enclosed inquiry slip ▲

Small motor Starting Switches with dependable overload protection

A-B QUALITY

Bulletin 600 Starting Switch with wrap-around cover removed to show thermal overload breaker.

The "burnout" of a small motor can be just as expensive—in terms of production dollars—as the failure of a larger motor. With this compact A-B Bulletin 600 starting switch, your motors—1 HP or less—have the overload protection they deserve. This starting switch automatically opens and disconnects the motor on dangerous overloads—and the switch cannot be held closed during such overloads. Also, the rugged snap-action switch mechanism has double break, silver contacts that never need servicing. Available in combination with pilot light or selector switch. Send for full information on these quality starting switches.

NEMA Type 1 with neon pilot light — NEMA Type 4 watertight weatherproof — NEMA Type 7 hazardous gas locations

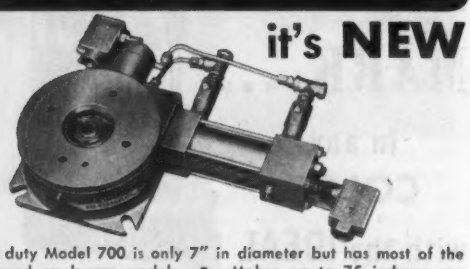
Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
Member of NEMA
Quality MOTOR CONTROL

▲ For more details circle NED-621 D on enclosed inquiry slip ▲

LOW COST 7" INDEX TABLE

it's NEW



The heavy duty Model 700 is only 7" in diameter but has most of the features found on larger models • Makes up to 75 indexes per minute • Handles maximum work load of 100 lbs. • Maximum power stroke is 3 times line pressure • Operates on pressures from 60 to 175 p.s.i. • Clockwise rotation with either 4, 6, 8 or 12 stations standard • Others up to 24 stations and counter-clockwise rotation, to order • Bolt larger sub-plate (up to 14" dia.) to ground steel table for larger work area • Positive index—no override • Adjustable cushion and speed control • Each table checked for guaranteed accuracy of index (± .0015"), concentricity and parallelism.

WRITE NOW FOR FREE CATALOG AND PRICE INFO.

AIR-HYDRAULICS INCORPORATED

231 HUPP AVE.
JACKSON, MICHIGAN

▲ For more details circle NED-622 D on enclosed inquiry slip ▲

Louis Allis MAGNETIC DRIVE

Based on a liquid-cooled magnetic coupling design, this unique drive features stationary-field construction — has no slip rings. Its exclusive annular cooling manifold prevents "flooding" of the drive and bearings—and eliminates condensation in the bearings with planned air-flow cooling. Conduit box, cooling inlet, and discharge can be conveniently located regardless of direction of rotation.

Specify your hp needs and Louis Allis will tailor the drive for the job. Write for Bulletin 3650. The Louis Allis Co., 436 East Stewart Street, Milwaukee 1, Wisconsin. ASD-136

LOUIS ALLIS

▲ For more details circle NED-623 D on enclosed inquiry slip ▲

H&B ESTABLISHED 1887

JACKETED PIPE and FITTINGS

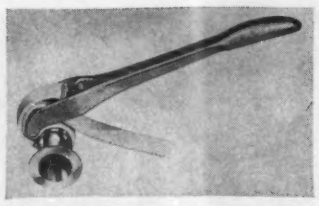
• The above cutaway illustrates H & B standard jacketed welded pipe and fitting construction, designed to allow complete jacketing of the product pipe. Special jigs and fixtures enable H & B to insure complete uniformity of the jacket area in relation to the O D of the product line and the I D of the jacket pipe. All H & B jacketed equipment is hydrostatically tested at 450 to 500 p.s.i. H & B welded steel jacketed fittings are ideally suited for process piping of pressures reaching 300 p.s.i. and temperatures up to 750°F.... A few of these fittings and valves are illustrated below. For more information send for bulletin J-57.

HETHERINGTON & BERNER INC.

725 Kentucky Ave. Indianapolis 7, Ind.

▲ For more details circle NED-624 D on enclosed inquiry slip ▲

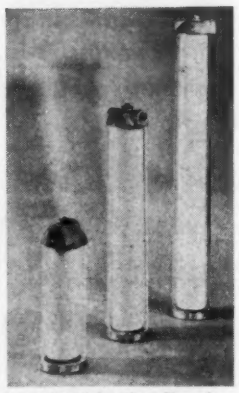
STRAP WRENCH
does not scratch, dent, or crush



Highly polished and delicate materials, cylinders, small hand wheels, knurled knobs, and odd-shaped parts are safely turned or adjusted with the Warnock strap wrench. Its fabric strap has a soft and firm grip that cannot scratch, dent, or crush. Lightweight handle is offered in 12, 18, and 24-in. lengths. • **Lowell Wrench Co.,** 97 Temple St., Worcester 4, Mass.

▲ For more details circle NED-625 D on enclosed inquiry slip ▲

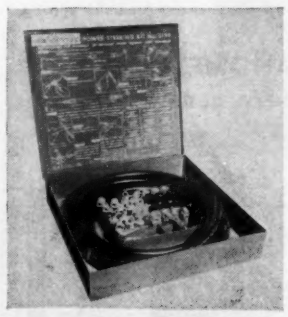
WATER FILTERS
have flow rates of 2½ to 15 gpm



Particles ranging from 5 to 50 microns in size are removed from water by these cartridge type water filters. The transparent acrylic barrels permit visual inspection. Four models have flow ratings of 2½ to 15 gpm, and they can be used in parallel for greater capacity. Loosening single nut facilitates replacing the filter cartridge which can be cellulose, cotton, glass fiber, or felt. • **Ion Exchange Products, Inc.,** 222 W. Ontario St., Chicago 10, Ill.

▲ For more details circle NED-626 D on enclosed inquiry slip ▲

POWER STEERING HOSE KIT
for replacement of lines, fittings



Everything needed to make hydraulic pressure and return lines for power steering units on all makes of materials handling trucks and other industrial vehicles, including highway trucks, is contained in Kit 5190. It includes a coil of Aeroquip 2555 power steering hose and a variety of Aeroquip re-usable fittings. Simple instructions are illustrated on the kit cover. • **Aeroquip Corp.,** 300 S. East Ave., Jackson, Mich.

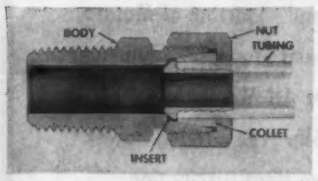
▲ For more details circle NED-627 D on enclosed inquiry slip ▲

TORQUE TESTER
has 0 to 100 lb-in. range

Beam type, dead weight torque tester permits fast, accurate checking and resetting of torque wrenches and screwdrivers. It is equally useful for left or right hand general torque checking. Tester accommodates both ¼ and ⅜-in. square drives and measures torques from 0 to 100 lb-in. Standard 20-in. and special 30 and 15-in. scales can be used with standard or special weights. • **Stuart D. Paterson Co.,** Box 44, Rochester 9, N. Y.

▲ For more details circle NED-628 D on enclosed inquiry slip ▲

PLASTIC TUBE FITTING
brass unit retains tube under stress

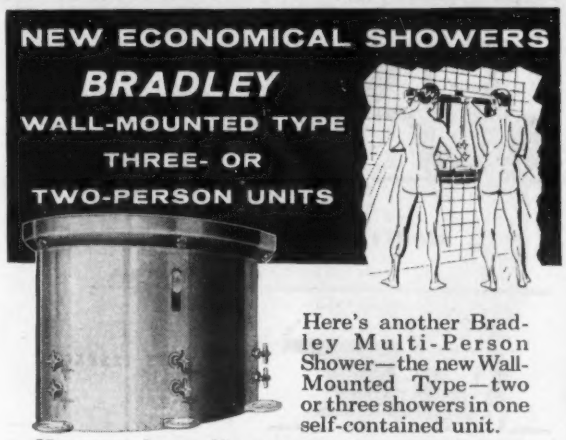


Complete retention on polyethylene, nylon, and other plastic tubing, even under high vibration and internal pressure, is assured with this Viseal brass fitting. Problem of plastic tube pulling out due to cold flow is eliminated. Brass insert in one end of the tubing holds tube firmly and prevents collapsing. Design prevents overtightening and facilitates disassembly. Fitting can also be used with copper, steel, and aluminum tubing. • **Commonwealth Brass Corp.,** 5835 Commonwealth Ave., Detroit 8, Mich.

▲ For more details circle NED-629 D on enclosed inquiry slip ▲

NEW ECONOMICAL SHOWERS

BRADLEY
WALL-MOUNTED TYPE
THREE- OR
TWO-PERSON UNITS



Here's another Bradley Multi-Person Shower—the new Wall-Mounted Type—two or three showers in one self-contained unit.

You can have Showers at low cost because installation on wall at any height requires but *one set of piping connections*—no floor space is needed and each bather has individual control of water volume and temperature.

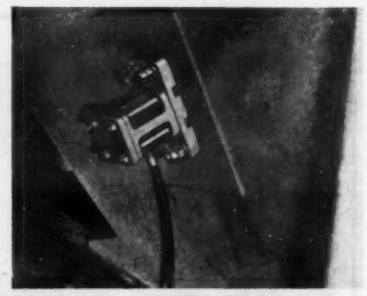
Made in stainless steel or enameled steel (in white and six decorator colors)—attractive, self-contained and assembled. For dimensions and other data see page 2 of new Shower Bulletin H-1322. Copy mailed on request. BRADLEY WASHFOUNTAIN CO. 2253 W. Michigan St., Milwaukee 1, Wis.

BRADLEY
multi-person showers

Write for Bulletin H-1322

▲ For more details circle NED-630 D on enclosed inquiry slip ▲

IF BINS WON'T BUDGE



LOOSEN STUBBORN MATERIALS . . .

that hold up production, waste man hours, with a Cleveland Model F Air Vibrator. Standard or air-cushioned for quiet operation, the Model F moves all types of materials from candy to concrete from bins, chutes and hoppers.

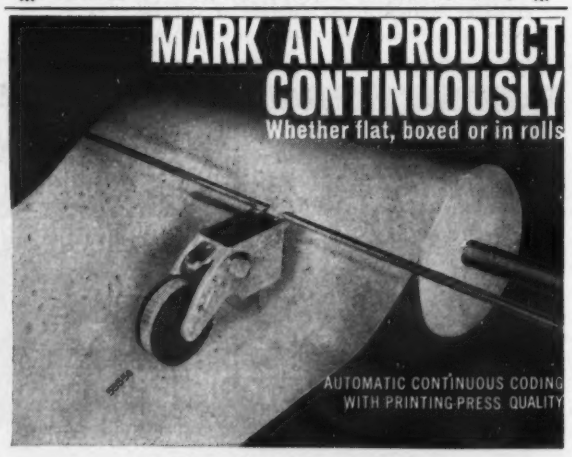
Inexpensive and dependable, a Cleveland Vibrator can be installed quickly and easily. With only one moving part, maintenance and lubrication are seldom needed.

Complete literature is available at your request, and a prompt quotation based on a description of your requirements will be sent with no obligation.

Air or Electric
Portable or Permanent
Silent or Standard

THE CLEVELAND VIBRATOR CO.
4K-2744 Clinton Avenue - Cleveland 13, Ohio

▲ For more details circle NED-631 D on enclosed inquiry slip ▲



ALGENE CONTINUOUS CODER

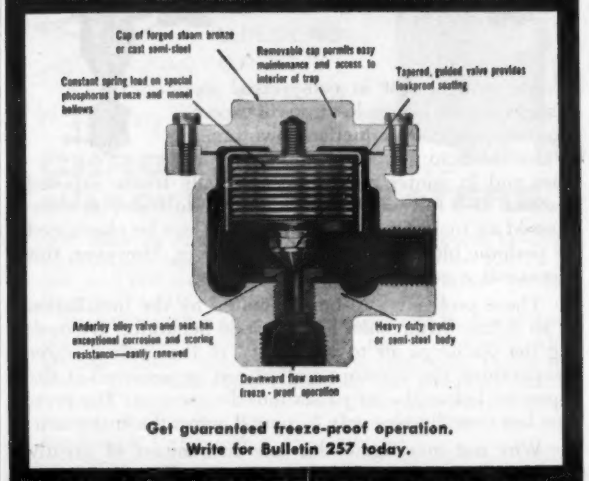
Just set it and let it run — continuous or intermittent, coding on cloth, kraft, corrugated, metal, paper, glass, plastics, cellophane, waxed surfaces — top, bottom or sides. Positive friction drive, long-run ink fountain, adjustable spring tension for clear impressions. Printing area ¾"x12" and up; Interchangeable rubber type or strips for quick changes. Ink for all surfaces supplied.

Write for free literature, specifications, low prices:

ALGENE MARKING EQUIPMENT COMPANY
Manufacturers of marking machines and corrugated printing presses.
232 PALISADE AVENUE ■ GARFIELD, NEW JERSEY ■ DEPT. NE

▲ For more details circle NED-632 D on enclosed inquiry slip ▲

INSTALL ANDERSON QUIK-FLEX THERMOSTATIC STEAM TRAPS FOR LOW MAINTENANCE FREEZE PROOF APPLICATIONS

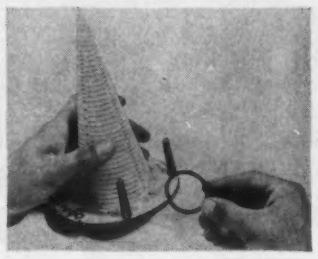


Get guaranteed freeze-proof operation. Write for Bulletin 257 today.

THE V. D. ANDERSON COMPANY
division of
INTERNATIONAL BASIC ECONOMY CORPORATION
1988 West 96th Street • Cleveland 2, Ohio

▲ For more details circle NED-633 D on enclosed inquiry slip ▲

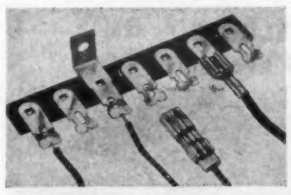
O-RING SIZE GAGE
checks ID and cross section



Single unit cone and base with adjustable cross section measuring strip comprise the visual O-ring size gage. The inside diameter is measured by placing the O-ring on the cone and the cross section is measured with slots in the base. Relationship between Parker or ARP (AN) sizes is checked by reading the vertical column on the adjustable strip. Price is $1.50. • **Parker Seal Co.**, 10567 Jefferson Blvd., Culver City, Calif.

▲ For more details circle NED-636 D on enclosed inquiry slip ▲

TERMINAL STRIPS
designed for three connector types



Universal lug terminal strips eliminate the need for stocking three types of strips for three types of connectors. Its 0.205-in. width suits it for use with junior size, quick-disconnect female connectors. Also accommodated are tie-point terminations in the inside slot and wrap-solder terminations in the wide notches. Photo shows all three types. • **Mandex Mfg. Co.**, Dept. ND-5, 2614 W. 48th St., Chicago 32, Ill.

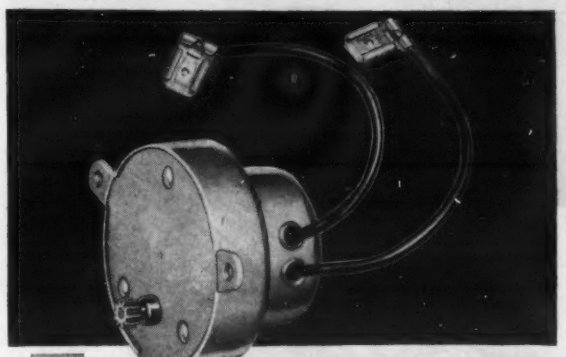
▲ For more details circle NED-637 D on enclosed inquiry slip ▲

TIME DELAY LIQUID SPRING
adjusts for delays to 42 min

Time delay relay on an electronic circuit is provided by the Model 38.008 Liquid Spring Shok using liquid compressibility. Its body is only 1 in. long by 3/8-in.

diameter, not including mounting ends. Time delay or lock-down at the end of the 1/4-in. stroke can be adjusted to provide up to 42 min delay for travel of 1/16 in. of the return stroke, then released for rapid travel of the last 3/16 in. to actuate other circuitry. Spring force is 8 lb endload and 6 lb preload. Other models have a built-in time delay of up to 24 hr on up to 2-in. stroke. • **Taylor Devices Inc.**, 188 Main St., North Tonawanda, N. Y.

▲ For more details circle NED-638 D on enclosed inquiry slip ▲



SYNCHRONOUS MOTORS
torque output *high* — dollar output *low*

CC synchronous motors are of the *permanent magnet* type, making them more reliable at higher torques — and inherent energy in the rotor results in more power than conventional clock motors. And its a *high production* motor designed to satisfy the cost-conscious volume user. Typical uses for this compact yet potent motor include timing devices, advertising displays and vending machines.

For long-life applications, an exclusive reservoir lubricating system is available. The rotor shaft is continuously bathed in oil, resulting in long, dependable performance.

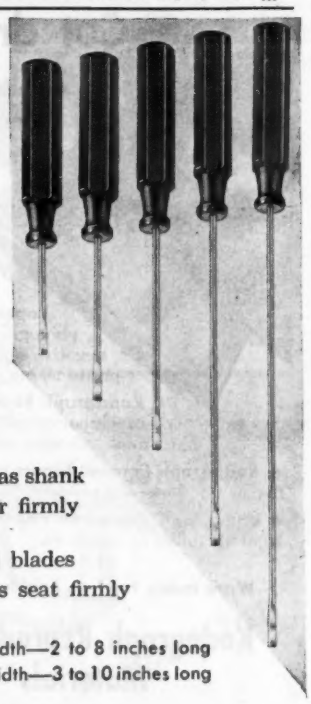
For more complete information, write for bulletin SL-15

CONTROLS COMPANY OF AMERICA
9577 Soreng Ave., Schiller Park, Illinois
COOKSVILLE, Ontario • NIJMEGEN, Holland

THESE PRODUCTS AVAILABLE AT LOCAL AUTHORIZED DISTRIBUTORS

▲ For more details circle NED-639 D on enclosed inquiry slip ▲

NEW Snap-on SCREWDRIVERS SPEED SMALL SCREW TURNING



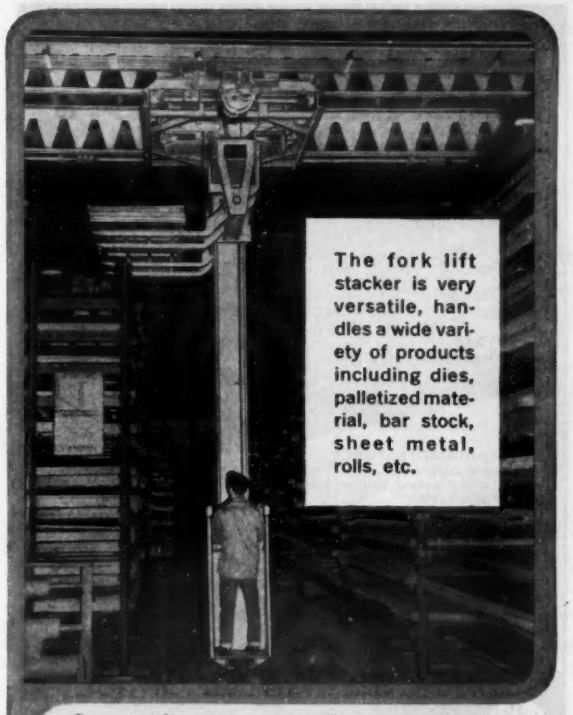
ELECTRICAL
ELECTRONIC
AIRCRAFT
AUTOMOTIVE
COMMUNICATIONS
ANY INTRICATE WORK

- Thin blade same width as shank
- Crimped shanks anchor firmly in handle
- Extra-tough alloy steel blades
- Precision-machined tips seat firmly in screw slot

SDE 450 set—1/8" blade width—2 to 8 inches long
SDE 650 set—3/16" blade width—3 to 10 inches long

FOR ALL INDUSTRY
SNAP-ON TOOLS
8110-D 28th AVENUE • KENOSHA, WISCONSIN

▲ For more details circle NED-634 D on enclosed inquiry slip ▲



Cut Costs... Save Space

Louden stacks higher with safety

Operational in the narrowest aisles, Louden Stackers conserve floor space making possible maximum utilization of storage area. And, they provide selective storage for a variety of materials so that each is immediately available.

An important design feature insures safe operation of Louden Stackers at all times. As a load approaches the upper limit, it is closest to the frame from which it is suspended. Thus, where the stacking height becomes hazardous for conventional floor operated equipment, the entire Louden Stacker assembly is at its most stable condition.

When you have material handling requirements, call on Louden, the pioneer of overhead handling. Benefit by Louden's unequaled experience and broad array of service-proven equipment. Most Louden installations pay for themselves in months; some have done so in a matter of weeks.

Write today for PHOTO REPORT NO. 108 . . . a variety of examples of Louden Stackers at work.

Louden MONORAIL & CRANES
THE LOUDEN MACHINERY COMPANY
404 Court, Fairfield, Iowa
A Subsidiary of Mechanical Handling Systems Inc.
SINCE 1867 . . . THE FIRST NAME IN MATERIALS HANDLING

▲ For more details circle NED-640 D on enclosed inquiry slip ▲

How to get custom stamping without special tooling!

ONE HIT PIN POINTS 63 HOLES in 60" dia. dish-stamped boiler door with tolerance of 1/16" on dia. and flat across flange within 1/16".

COST CUT FROM $8.49 to $2.59 per unit through use of dies in COMMERCIAL "Die Bank" in custom stamping wheel covers for aircraft towing tractor.

STAMPED CLUTCH HOUSING held to tight tolerances of +.005" -.000", +.005" -.005" and +.000" -.010" eliminates costly machining.

"Die Bank" of more than 20,000 available die components saves cost of new dies

Die components from COMMERCIAL's extensive "Die Bank" are economically meeting unusual stamping requirements for many industries—with extensive savings in tooling expense. In many instances, the "Die Bank" combined with a small additional tool cost will handle your exact requirement.

Modern press equipment—100-ton to 2000-ton—bangs out more hits per hour to further contribute to lower unit cost for medium to heavy stampings.

SEND FOR FREE BULLETIN
Illustrated Bulletin 200-P3 describes COMMERCIAL's routine handling of many unusual metal forming jobs for industry.
Write Commercial Shearing & Stamping Co. Dept. J-14, Youngstown 1, Ohio.

COMMERCIAL shearing & stamping

▲ For more details circle NED-635 D on enclosed inquiry slip ▲

Service men all across the country agree . . . there's no other screw driver or nut driver with the built-in comfort of the VACO "comfordome" handle. Makes service work easy! Enjoy the luxury grip of a VACO . . . the driver that gives plenty of power, yet is always kind to hands. Next time choose a VACO and *feel the difference!*

Manufactured and Unconditionally Guaranteed by
VACO PRODUCTS CO., 317 E. Ontario St., Chicago 11, Ill.
In Canada: VACO-LYNN PRODUCTS CO., LTD., Montreal 1, Que.

▲ For more details circle NED-641 D on enclosed inquiry slip ▲

IN-LINE
DIGITAL DISPLAY
with ONE-PLANE PRESENTATION
Series 10,000

OUTSTANDING FEATURES
- Reliable, dependable, no moving parts
- All digits displayed on front surface viewing screen
- All digits uniform in size and intensity
- High-contrast viewing screen insures utmost visual sharpness
- Digit style of your choice to complement manufacturer's original equipment
- Colored digits of your choice for special environmental lighting
- Individual units may be assembled in groups for convenient panel mounting
- Dimensions: 1 9/16" wide, 2 5/8" high, 5 5/8" long

PRICE PER UNIT
$18.00
Quantity Prices on Request

WRITE TODAY FOR COMPLETE DETAILED SPECIFICATIONS

Representatives in principal cities

INDUSTRIAL ELECTRONIC ENGINEERS, Inc.
Engineers and Manufacturers of Fully Automatic Systems and Machines
5528 Vineland Avenue, North Hollywood, Calif.

▲ For more details circle NED-642 D on enclosed inquiry slip ▲

REELS roll SMOOTHLY on ROLL-A-REEL

for pay-out or take-up of anything on reels

No pulling heavy reels . . . no pushing . . . JUST LOAD and away you go!

- Easily portable
- No jacks
- Handle any reel diameter
- Heavy steel frame
- Slanted front
- Ball-bearing adjustable rollers
- Positive roller lock for unloading

STYLE B — 4,000 lbs. cap. for 1 reel up to 48" wide; or for 2 reels up to 24" wide each. Weight 110#. PRICE $84.50 f.o.b. Cincinnati

All are drilled for optional auxiliary ball-bearing side rollers, $5.00 per set extra.

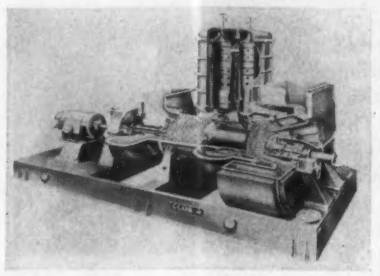
STYLE A — 2,000 lbs. cap. for reels up to 28" wide. Weight 60#. PRICE $46.50 f.o.b. Cincinnati

- Special sizes on request.

ROLL-A-REEL 4626 Reading Road Cincinnati 29, Ohio

▲ For more details circle NED-643 D on enclosed inquiry slip ▲

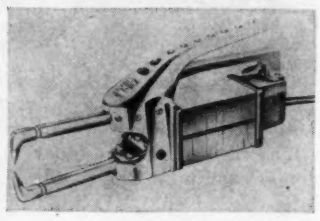
LARGE GAS TURBINE develops 9000 bhp at 5000 rpm



Burning either liquid or gaseous fuels, the Model 305-S open cycle, single shaft gas turbine will operate continuously at normal rated speed of 5000 rpm and has NEMA rating of 9000 bhp. It is especially suited for driving centrifugal compressors, generators, and pumps or other equipment using limited speed flexibility and rotative power. Simplicity of design, relatively constant speed, air cooling, ease of servicing, and choice of starting devices are features. • **Clark Bros. Co.**, Box 560, Olean, N. Y.

▲ For more details circle NED-644 D on enclosed inquiry slip ▲

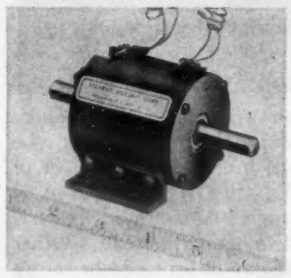
PORTABLE SPOT WELDERS 24-lb 3.3 and 4.4 kva units



Two portable, 24-lb spot welders will accommodate up to 1/8 in. combined thickness of mild steel, stainless steel, and galvanized iron. Units are designed for sheet metal or wire operations, and for use in metal fabrication, vehicle body repair, construction, and maintenance. Model 11 operates on 115 v ac and is rated 3.3 kva, whereas Model 23 requires 230 v ac and is rated 4.4 kva. Fixed top tong enables operator to rest the weight of the welder on spot to be welded using only one hand. Added contact pressure assures a sound weld. Weld time varies with contact, thickness, and type of metal. Various tongs are available. • **Metal & Thermit Corp.**, Rahway, N. J.

▲ For more details circle NED-645 D on enclosed inquiry slip ▲

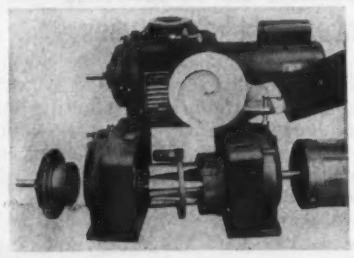
MINIATURE CLUTCH-BRAKE operates on up to 90 v dc



Rated 1.55 amp and made for any voltage up to 90 v dc, this 2.2 SMCB miniature clutch - brake combination operates magnetically. When the current is on the clutch magnet and off the brake magnet, the clutch will operate and vice versa. With current off both magnets in neutral, free-wheeling is provided. Torques of brake and clutch are both 8 lb-in. Furnished with bearing-mounted drive and driven shafts, it has feet for ease of mounting. • **Stearns Electric Corp.**, 120 N. Broadway, Milwaukee 2, Wis.

▲ For more details circle NED-646 D on enclosed inquiry slip ▲

ADJUSTABLE SPEED DRIVE features linear speed control and can be stalled without damage

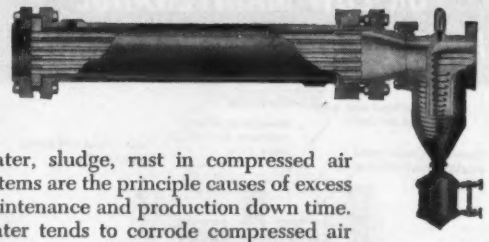


Equal changes in speed for equal increments of control adjustment are provided by the control of this infinitely variable speed transmission. The cam type linear control insures accurate setting and holds speed over a range from any desired maximum to zero, plus reverse if desired. Speed can be changed while the unit is running or stationary. Differential action makes possible stalling of the output shaft without damage to rotating parts.

Both the transmission and the driven machine are protected against overload damage. Unit is available with motor as shown or without motor. Built-in spur reducers with parallel shaft extension or worm reducers with right angle extension are offered. Transmission shown has micrometer control, but mechanical, electrical, or pneumatic controls can be specified. • **Graham Transmissions Inc.**, Menomonee Falls, Wis.

▲ For more details circle NED-647 D on enclosed inquiry slip ▲

An Adams Aftercooler Can Eliminate Your Compressed Air Troubles



Water, sludge, rust in compressed air systems are the principle causes of excess maintenance and production down time. Water tends to corrode compressed air lines and in winter months will actually freeze exposed systems. It is not uncommon for water to freeze in compressed air tools. Of course, some water can be eliminated by periodic blow-down of the air receiver. However, this represents a considerable loss of power.

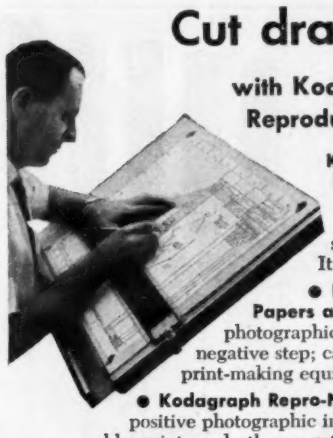
These problems can be eliminated by the installation of an Adams Aftercooler and Cyclone Separator. By cooling the discharge air to within 10° of the cooling water temperature, the moisture and oil can be removed at the separator before the air passes into the receiver. The pressure loss is negligible—only 1/2 pound across the entire unit.

Why not investigate this low cost means of greatly increasing your compressed air operating efficiency? Write today for Bulletin 714.

R. P. ADAMS CO., INC.
227 EAST PARK DRIVE, BUFFALO 17, NEW YORK

▲ For more details circle NED-648 D on enclosed inquiry slip ▲

Cut drafting costs
with Kodagraph Reproduction Materials!



Kodagraph Reproduction Materials help eliminate retracing . . . produce better shop prints . . . simplify print production. It will pay you to use them.

- **Kodagraph Autopositive Papers and Film** produce positive photographic intermediates without a negative step; can be exposed in standard print-making equipment.
- **Kodagraph Repro-Negative Paper** gives you positive photographic intermediates directly from blueprints and other negatives.
- **Kodagraph Contact Papers** produce outstanding negatives in contact photocopy printers.
- **Kodagraph Projection Papers** give quality enlargements from microfilm or negatives.

Write today for free booklet

Kodagraph Reproduction Materials

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.

Kodak

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FORM! TWIST! SWAGE! WELD!

NATIONAL-STANDARD *Nickelply* wire can improve your product...*

National-Standard Nickelply wire is steel wire electro-plated with nickel in coating weights up to 10% for diameters up to .340". The nickel jacket, with either a bright or matte finish, is precisely concentric and inseparably bonded to the wire . . . can be formed, twisted, swaged or welded without fracturing the nickel jacket or exposing the base metal . . . ideal for corrosion resistance, for decorative uses and for certain high ambient temperature services.

* T.M.

NATIONAL-STANDARD COMPANY
Niles, Michigan

▲ For more details circle NED-650 D on enclosed inquiry slip ▲

CHROMALOX SNAP-ON DRUM HEATERS

Just snap on and plug in . . . for fast, uniform heating. 5-gallon size temperature ratings from 140° to 230°F . . . 300 to 1,000 watts. 55-gallon size temperature ratings from 140° to 190°F . . . 750 to 1,500 watts.

Resistance wires are double covered with braided Fiberglass and woven into a flexible mesh. Available with silicone rubber coating or impregnated with Teflon for added protection against abrasion and chemical attack.

Write for prices. Tell us which size and what is to be heated. Edwin L. Wiegand Company, 7509 Thomas Boulevard, Pittsburgh 8, Pennsylvania.

CHROMALOX *Electric Heat*
INDUSTRIAL • COMMERCIAL • RESIDENTIAL

▲ For more details circle NED-651 D on enclosed inquiry slip ▲

CLAIR SURFACE FINISHING MACHINE

Incredibly, the new CLAIR model 309 Pinch-Roll, Thru-Feed machine does many jobs heretofore thought impossible. For almost any surface finishing problem, this versatile new CLAIR model is the "ONE-PASS" answer.

metals
woods
alloys
plastics

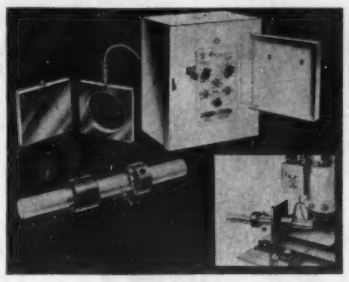
CLAIR MODEL 309

MANUFACTURING CO., Inc., OLEAN, N.Y.

Offering the Most VERSATILE Line of Surface Finishing Machines

▲ For more details circle NED-652 D on enclosed inquiry slip ▲

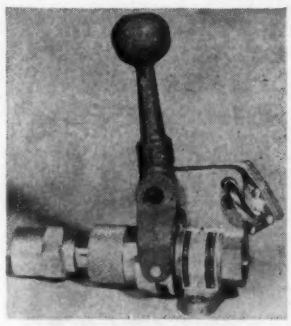
PROXIMITY SWITCH CONTROL for heavy duty industrial presses



This proximity die saver switch for use on any heavy duty press in which a "dog," "pin," or air clutch is electrically operated, instantly detects press malfunction and stops the equipment automatically. Metal parts passing through or by a detection coil cause electrical pulses which hold a relay closed for a preset time. If part fails to pass through the coil within time set, relay opens and press stops. Unit has a fail-safe high frequency oscillator and electronic timing circuit. • **Robotron Corp.**, 21300 W. Eight Mile Rd., Detroit 19, Mich.

▲ For more details circle NED-654 D on enclosed inquiry slip ▲

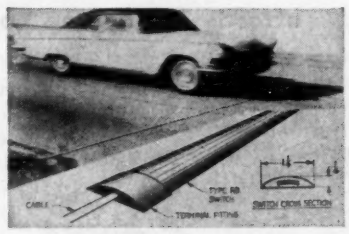
LOCKING SLEEVE VALVE prevents unauthorized operation



Locking feature of sliding sleeve valves prevents unauthorized operation. This assures safety to those servicing air-operated machines. It further prevents danger of machine losing air at the wrong time. Valve can be locked with a padlock in "off and exhaust" or "on and flow" positions. It is made with two and three-way actions, manual or spring return, and in tap sizes of 1/8 to 1 in. • **Hunt Valve Co.**, 2200 E. Pershing Ave., Salem, Ohio.

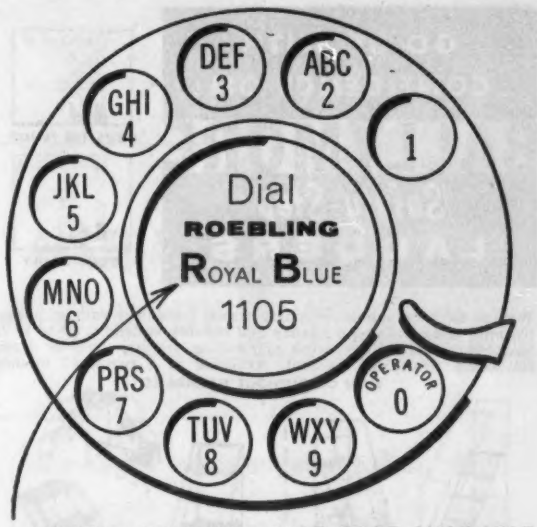
▲ For more details circle NED-655 D on enclosed inquiry slip ▲

CONTINUOUS STRIP SWITCH circuit closed by passing vehicle



Heavy duty Type RB (roadbed) continuous strip switch contains contacts along its full length which are closed whenever a vehicle passes. Vinyl jacketed switch is 1¼ in. wide, ¼ in. thick, and is supplied in 50-ft rolls. End fittings are available. It may be cemented or anchored to the surface for temporary use, or permanently placed in a ¼-in. deep groove in concrete or black top. Price is 74 cents per foot in quantity. • **Tapeswitch Corp. of America**, 229 Linden Blvd., Cambria Heights 11, N. Y.

▲ For more details circle NED-656 D on enclosed inquiry slip ▲



. . . FOR THE TOUGHEST WIRE ROPE AVAILABLE

Roebling Royal Blue wire rope—made to last like no other rope you've *ever* used. Made from Type 1105 rope wire, extra-high strength improved plow steel, *Roebling-made steel, made only for wire rope.* Used in construction, logging, mining, quarrying, lumbering, petroleum and all kinds of manufacturing industries—*anywhere* wire rope is used. Royal Blue stays on the job and works hard.

Ask Roebling's Wire Rope Division, Trenton 2, New Jersey for the *saving* details.

ROEBLING
Branch Offices in Principal Cities
John A. Roebling's Sons Division
The Colorado Fuel and Iron Corporation

▲ For more details circle NED-657 D on enclosed inquiry slip ▲

The SL2 snap-lock • Newest NAMCO Machine Life Limit Switch

Snap-Lock Limit Switches, developed by National Acme to meet rigid specifications, have become industry's standard for reliable "machine life" service. Latest and most advanced in the complete line is the SL2. Built with machine tool precision and ruggedness, it will give millions of fast, accurate contacts.

Closely Check These Outstanding Features

1. Flexible Operation . . . To meet the requirements of any application, standard cam blank can be cut into a wide variety of configurations. Interchangeable, these cams provide positive control of contact sequence; permit tailoring switch performance to individual jobs.

2. Ample Overtravel and By-pass . . . Sixty-seven degree overtravel . . . 90° by-pass . . . 180° arc.

3. Clockwise or counterclockwise motion . . . Converting from clockwise to counterclockwise motion takes but a few seconds.

4. Light Operating Pressure . . . Tripping action requires only 12½ pounds at 1½ inch radius . . . 50% less than previous models. Overtravel reduced so as to require only 8 pounds at 1½ inch radius.

5. Shock-proof Design . . . Positive mechanical lock mechanism withstands shock and vibration.

6. Fast Contact Action . . . High make-and-break contact speed permits use in unusual applications.

7. High Contact Pressure . . . Contact bounce minimized by use of new contact material that permits 15 oz. contact pressure.

Write for Bulletin EM-SL60 containing complete detailed information

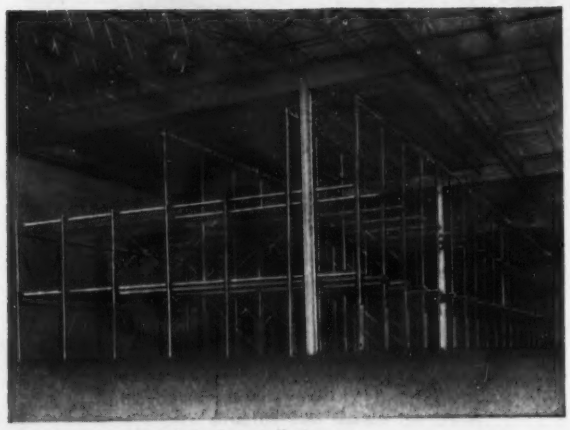
National Acme THE NATIONAL ACME COMPANY 182 E. 131st STREET CLEVELAND 8, OHIO

Sales Offices: Newark 2, N.J.; Chicago 6, Ill.; Detroit 27, Mich.

▲ For more details circle NED-658 D on enclosed inquiry slip ▲

American

OPEN-END Drive-In or Drive-Thru

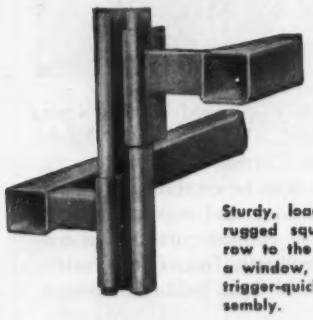


American Open-End Rack installation, Kingsport Press Company, Kingsport, Tennessee.

ADJUSTABLE RACKS

quickly pay for themselves in cutting labor costs and in giving extra storage space

MOST for the LEAST . . . MOST in cube storage and storing efficiency . . . LEAST in labor costs. American "Drive-Thru" racks are open at both ends, so trucks can travel all the way through for first-in, first-out storage. American "Drive-In" racks, with one end open, are for use against a wall, or where first-in, first-out storage is not necessary. American trigger-quick, slide-n-lock stringers mean quick adjustability for speedy load handling. Send for all the facts about these rugged storage racks today!



send for literature

Sturdy, load-carrying stringers are made of rugged square tubing from one end of a row to the other. They raise and lower like a window, on 4" centers, with the American trigger-quick, slide-n-lock method of assembly.

AMERICAN METAL PRODUCTS CO.
STORAGE RACK DIVISION
5977 Linsdale Ave. amp® Detroit 4, Michigan

▲ For more details circle NED-653 D on enclosed inquiry slip ▲

GO UP WITH CONFIDENCE ON
BALLYMORE
Safety-Step
LADDERS

GRIPS THE FLOOR

ROLLS EASILY

Welded steel or aluminum safety treads combined with wide-base pyramid design offer extra safety and stability at heights up to 15 ft. Spring-mounted casters permit easy rolling, yet grip the floor firmly for safety. Corrosion-resistant. Available in 4 types, 47 models.
WITH OR WITHOUT HANDRAILS

For illustrated catalog covering complete line, write to
BALLYMORE COMPANY, WEST CHESTER 3, PA.

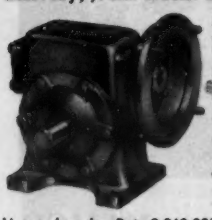
Call your LOCAL DISTRIBUTOR

BALLYMORE
EQUIPMENT FOR WORKING *Safely* ABOVE FLOOR LEVEL

▲ For more details circle NED-659 D on enclosed inquiry slip ▲

956
different motorized speed reducers
available from stock

Yes! 956 different combinations of Perfection Motorized Worm Gear Speed Reducers are available for immediate delivery, *from stock*. Ratios range from 5 to 1 to 60 to 1, in capacities from ⅙ H.P. to 5 H.P. Perfection "C" Flange Reducers may be ordered complete with motor or without motor, to be used with a motor *of your own choice*. Write for free copy of our new 28 page catalog No. M-140.



Licensed under Pat. 2,868,031
AMERICAN STOCK GEAR DIVISION
PERFECTION GEAR COMPANY HARVEY, ILLINOIS
▲ For more details circle NED-660 D on enclosed inquiry slip ▲

STOP ELECTRICAL TROUBLES
before they begin with the COLUMBIA
VOLT-AMMETER

Know how much current your equipment is pulling . . . spot overloads and short-circuits . . . balance loads . . . minimize electrical hazards. Columbia Type AC-1 Volt-Ammeter saves time, gives accurate readings up to 600 amperes and 600 volts on frequencies from 25 to 400 cycles. Conveniently sized, easy to use. Switch allows operator to quickly select AC ranges: 0/12/60/120/600 amperes; 0/150/600 volts. Readings are taken without circuit interruption. Insulated jaws accommodate conductors up to 1½" diameter or bus bars to 2" x ½".

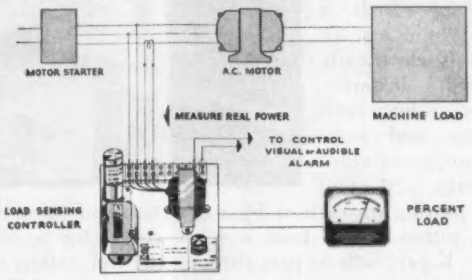
$57.50 with Voltage Leads and Carrying Case

Write today for Bulletin AC-25 *Immediate Delivery*

COLUMBIA
COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO
▲ For more details circle NED-661 D on enclosed inquiry slip ▲

MOTOR-LOAD CONTROLLER
senses both voltage and current

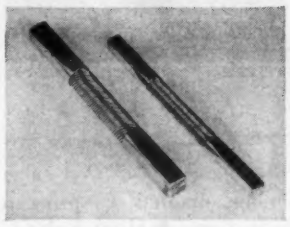
Both voltage and current are sensed by this motor load-controller, measuring the real load on a drive motor continuously. It either actuates a visible or aud-



ible alarm, or shuts down the driven machine to prevent damage in case of overload. Instrument operates with single or three-phase systems at 110, 220, or 440 v ac. It measures real load in kilowatts and indicates the measurement in percentage of rated load from zero to any overload percentage. Alarm or shut-off can be adjusted to operate at any overload percentage. • **Seneca Falls Machine Co.**, 23 Fyfe Bldg., Seneca Falls, N. Y.

▲ For more details circle NED-662 D on enclosed inquiry slip ▲

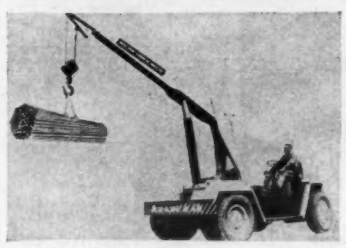
FLEXIBLE SHAFT COUPLINGS
stainless steel type for 1000° F use



Length of these stainless steel flexible shaft couplings can be varied to suit the application. They have ½ and ⅜-in. diameter stainless steel flexible shaft cores and operate up to 1000° F. The square ends engage the drive and allow for slight changes in length due to varying torque. • **Stow Mfg. Co.**, 26 Shear St., Binghamton, N. Y.

▲ For more details circle NED-663 D on enclosed inquiry slip ▲

BOOM CRANE VEHICLE
affords 360-degree boom swing



All - hydraulic continual rotating boom of the Krane Kar swings 360 degrees on a ball - bearing turntable. Vehicle is furnished in the 12,000 and 20,000-lb capacities. These ratings are at 6 ft 6 in. radius. With hydraulic outriggers, capacity of larger model can be stepped up to 24,000 lb. High boom underclearance allows efficient handling of bulky loads in box cars and trailers, and dual traction tires afford high flotation and protection against blowout and upsets. • **Silent Hoist & Crane Co.**, 841 63rd St., Brooklyn 20, N. Y.

▲ For more details circle NED-664 D on enclosed inquiry slip ▲

METAL CORROSION DETECTORS
virtually detect atom-by-atom loss

Essential element of Magna-Film corrosion indicators is a vacuum deposited film of metal, 0.000002 to 0.000050 in. thick. Units will detect as little as 5 billionths of an inch of metal loss, virtually atom by atom. Visual type Model 201 for use in small packages of precision parts reveals corrosion by high contrast between sensitized portion and reference portion. Model 301 is a good-bad electrical indicator for use where visual types are not practical. Portable, battery-operated Model 10 corrosion meter reads the Model 301 indicators. Model 501 is designed for use with Corrosometers where approximate rates of corrosion must be established. Units will detect water in hydrocarbons and expose corrosive conditions harmful to missile components before corrosion occurs. • **Magna Products, Inc.**, Crest Instruments Div., 11808 S. Bloomfield Ave., Santa Fe Springs, Calif.

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sprays or flows the new
MULTIPLE COMPONENT MATERIALS

. . . opens up vast new areas of finishing, coating and build-up material technology . . . for the first time really places this technology at your disposal . . . opens up exciting new production possibilities never before practical.

Send for Bulletin A-54-5. Learn the details of this remarkable and practical advance in spray or flow applying new "miracle" materials.

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TINSLEY THICKNESS GAUGE

DUAL-SCALE

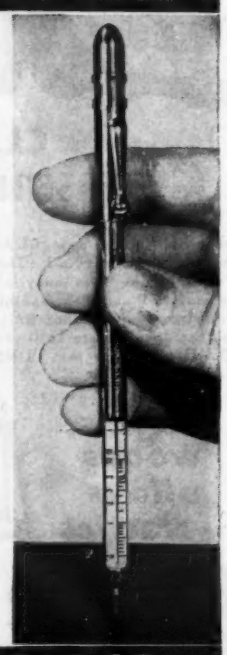
A simple and inexpensive gauge for measuring the thickness of non-magnetic coatings such as paints or plating on ferrous bases.

FEATURES
- Easy to use and carry
- Will determine thickness on radii (irregular or curved surfaces present no problem)
- Not affected by vibration and temperature—special Alcomax magnet used
- Negligible error, if any, if used in vertical upside down position, or horizontally
- Will not damage coatings
- An additional scale for special calibrations is on the reverse side of each gauge.

Range: 0.0002 to 0.015 inches (or 0-400 microns)

Mean Accuracy: ± 15% or 0.0001 inch whichever is greater.

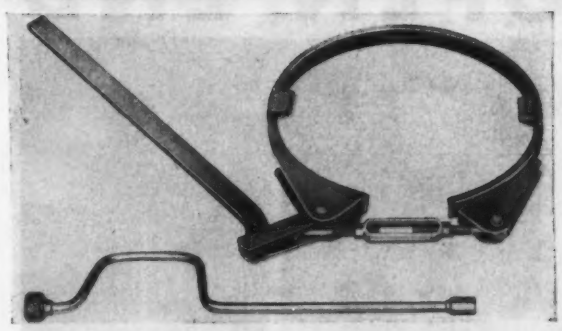
Write for BULLETIN 28P1-D



B-608

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.
▲ For more details circle NED-667 D on enclosed inquiry slip ▲

DRUM PARTS CLOSING TOOL
Speeds Open Head Drum Closures



A simple, quick-acting closing tool, so efficient, so easy-to-use it will speed closure of all types of open head drums—especially the outstanding locking rings developed by Drum Parts, Inc. These include:
PLAIN LUG RINGS • OVERLAPPING RINGS
WELD NUT RINGS

Complete Catalog illustrates and gives full details for closing tools, rings and accessories to fit all drum closing needs. Send for your copy today.

DRUM PARTS, INC.
10311 Meech Ave. Cleveland 5, Ohio
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NOW WASH WINDOWS HIGH or LOW FASTER AND SAFER with a Tucker Window Washer

TUCKER WINDOW WASHERS *Feature*

- TELESCOPIC HANDLES
- AUTOMATIC, VISIBLE DETERGENT
- COMPRESSED DETERGENT
- SPECIAL WINDOW BRUSHES

Easy to Operate

If your custodian wants to try a Tucker Window Washer, we will ship prepaid with the understanding that the washer may be returned for cancellation if not satisfied.

ONLY TUCKER Window Washers can show you how to save time and money in cleaning your inaccessible windows. Up to now, it was necessary to erect costly scaffolding. With a Tucker window wand, it is a simple time and money-saving task to clean those windows . . . and by standing on terra firma.

Available Through Your Favorite Sanitary Supply Dealer . . . or Write For Full Particulars, Prices and Measuring Instructions to —

TUCKER MANUFACTURING CO.
CEDAR RAPIDS, IOWA

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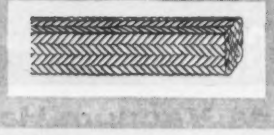
Available in Stainless Steel, Silicon Bronze, Brass, Aluminum and Steel

JACOBSON NUT MFG. CORP. Kenilworth, New Jersey

▲ For more details circle NED-670 D on enclosed inquiry slip ▲

FOR HIGH OR LOW SPEED ROTARY OR RECIPROCATING MOTION . . .

PALMETTO®
Interwoven Asbestos Packings

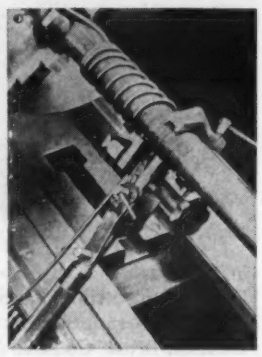


• For the ultimate in durable packing construction choose from the nine *interwoven* packings in the Palmetto Self-Lubricating Packing line . . . Combines density of braid over braid—flexibility of plaited. Send for your copy of SLP-659 that gives service conditions, applications, prices, etc.

GREENE, TWEED & CO.
NORTH WALES, PA.

For more details circle NED-671 D on enclosed inquiry slip ▲

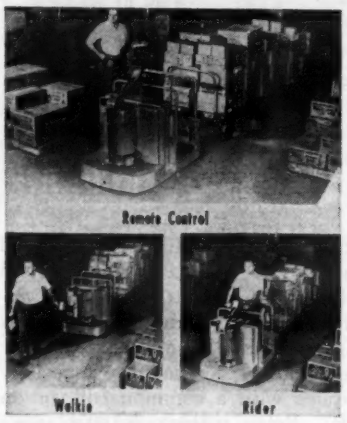
SPRING WINDING DEVICE used in any lathe or vise



Precision coil springs are produced from round and square wire by the Helios Springwinder. It mounts to any lathe with a minimum of set-up for duplicating any number of springs to close tolerances. Winder can be used manually in a vise for small wire sizes. A built-in pitch control permits making cylindrical extension springs with variable initial tension and compression springs with any desired pitch and closed ends. Three models take 0.008-0.060, 0.020-0.200, and 0.080-0.600-in. wire sizes. • **Collins-Faust Co.**, 18 Park End Place, Forest Hills 75, N. Y.

▲ For more details circle NED-672 D on enclosed inquiry slip ▲

TRANSPORTING TRACTOR operated as walkie, rider, or remote controlled unit by one man



Speed and economy in order picking operations involving one man and a single tractor are achieved with the Model UTE Transporter tractor. It can be operated as a walkie or rider type unit, or remotely controlled within a 100-ft range through a transistorized remote control system. The miniature self-powered transmitter can be held in the hand, carried in a pocket, or clipped to user's belt. Pressure on unit's control button operates the tractor in its first travel speed only.

Steel cased, transistorized receiver is mounted on the tractor behind the operator. Each tractor has a built-in antenna and its own frequency, permitting a number of them to be operated in the same building. Tractor is available for 12, 18, or 24-v operation, as is the radio control system. • **Automatic Transportation Co.**, 149 W. 87th St., Chicago 21, Ill.

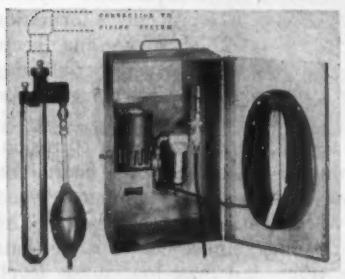
▲ For more details circle NED-673 D on enclosed inquiry slip ▲

POCKET TOOL drives variety of screws and nuts

Many fastener driving jobs can be done with this Model 400 four-way pocket tool which readily fits a variety of nuts, bolts, and screws. Tool has a red plastic handle with a 1/4-in. socket at one end and a 7/16 in. socket at the opposite end for driving hex fasteners. Double-end blade is inserted in the latter socket, converting the tool to either a 3/16 in. slotted or No. 1 Phillips screwdriver. • **Xcelite, Inc.**, Orchard Park, N. Y.

▲ For more details circle NED-674 D on enclosed inquiry slip ▲

PIPE LEAK DETECTOR is simple, portable instrument



Leaks in gas, refrigeration, and other systems are found by the De-Tekta-Leak, a U-tube manometer with necessary fittings, plus a rubber bulb or small powered pump to build up system pressure. A leak-tight shutoff cock seals off the system after it is pressurized. Loss of indicated manometer pressure indicates a leak. Needle valves prevent loss of fluid from the manometer when not in use. • **Eclipse Fuel Engineering Co.**, Combustion Div., 1100 Buchanan St., Rockford, Ill.

▲ For more details circle NED-675 D on enclosed inquiry slip ▲

FACTUAL NEW BOOK

on a unique (use it anywhere) check valve

Combined with practically any standard pipe fitting, the DURABLA *Basic-Check* Unit becomes a complete check valve—for almost any service. *It operates perfectly in any position . . . handles any liquid, gas or air.*

For the full story on these versatile valves, send for a free copy of this *new* booklet. Includes typical applications, construction details, table of sizes and weights, etc. Ask for Form 300 NED40.

DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N. Y.

Patent No. 2,649,277 **DURABLA®** DM-28

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GIVES YOU MORE for LESS MONEY than ANY OTHER COPYING MACHINE

★ Your first cost is lower. Prices start at $129.50.
★ Your material cost is only 1½c per sq. ft.
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★ Rotolite features a single lamp to ovecome operating difficulties encountered in multiple lamp machines. Rotolite prints are made on the surface of a single lamp rotated by a patented method, for simplest efficiency and speed.
Prices 18" is $129.50; 27" is $149.50; 42" is $189.50.
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☐ Please send literature.
☐ Please arrange to demonstrate Rotolite.
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City ..... Zone ..... State .....

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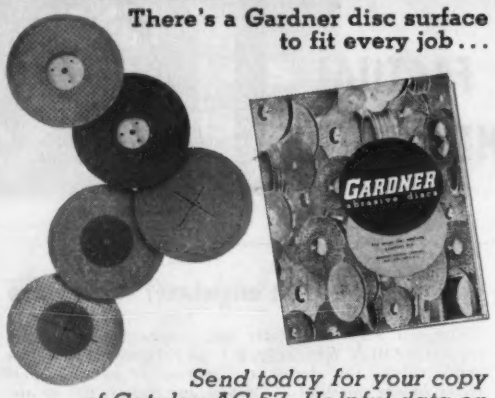
the right disc surface can lower your abrasive costs!

There's a Gardner disc surface to fit every job...



Send today for your copy of Catalog AC-57. Helpful data on selection and performance.

GARDNER abrasive discs

460 Gardner St.
Beloit, Wisconsin

For more details circle NED-678 D on enclosed inquiry slip

How to Sweep congested areas extra-clean ...at 67% less cost

- Sweeps 28" path with main brush (40" path with side-brush)
- Toe-tip shifting leaves both hands free for steering
- Front wheel drive, rear wheel steer. Turns in 5' radius
- Works easily in congested areas
- Powerful vacuum, large filter gives extra-clean sweeping
- Both gas or LP-gas models

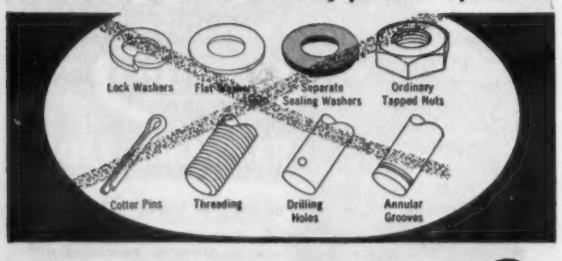
Fast-working Tennant Model 53 usually sweeps your plant at ⅔ less cost than hand methods... even in congested areas where you'd never think a rider-type sweeper could go! **Only 42" wide** with side-brush, it sweeps a block-long 40" path in less than a minute. Sweeps *extra-clean* in a single pass. Powerful brush-and-vacuum system gets dirt that pushbrooms miss . . . even sucks dust from floor cracks! **Handles easily** in narrow aisles, on ramps and in congested areas. Starts, stops, reverses instantly. *Write for illustrated bulletin.*

TENNANT *Industry's Most Widely Used* POWER SWEEPERS

G. H. TENNANT COMPANY • 715D NO. LILAC DRIVE • MINNEAPOLIS 22, MINNESOTA

For more details circle NED-679 D on enclosed inquiry slip

PALNUT® LOCK NUTS and FASTENERS
Eliminate
one or more of these assembly parts or operations



Provide vibration-proof assemblies!

A single PALNUT Lock Nut replaces two, three, even four fastening parts according to application and type used. Cost less than plain nuts—save space—save 65-85% in fastener weight—assemble fast with standard tools. Other PALNUT Fasteners apply on unthreaded studs, rods, pins, etc. to save threading, grooving, drilling for cotter pins. Describe application for free samples. Write for detailed literature.

THE PALNUT COMPANY
Division of UNITED-CARR Fastener Corp.
45 Glen Road, Mountainside, N. J.
Canada: P. L. Robertson Mfg. Co., Ltd., Milton, Ont.

PALNUT® Lock Nuts and Fasteners
for quick, secure fastening at low cost

For more details circle NED-680 D on enclosed inquiry slip

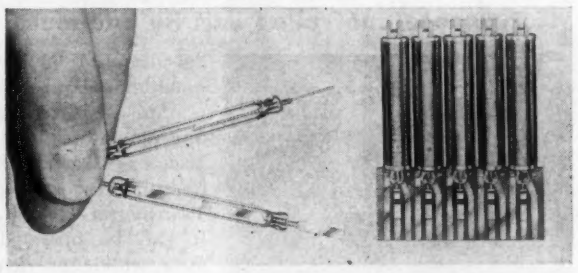
FLOOR BRUSH
bristles suited for rough surfaces

Polypropylene plastic used in the Speed Sweep floor brush resists oil, grease, alkalies, and acids, as well as heat and cold. The long wearing brush for heavy duty sweeping of rough and semi-rough surfaces has a 4-in. tuft trim, a lightweight steel back, and an adjustable, reversible handle. Prices of 14, 16, 18, and 24-in. sizes range from $5.18 to $7.35. • **Milwaukee Dustless Brush Co.**, 530 N. 22nd St., Milwaukee 3, Wis.

For more details circle NED-681 D on enclosed inquiry slip

SEALED REED RELAY
has over 100 million-operation life

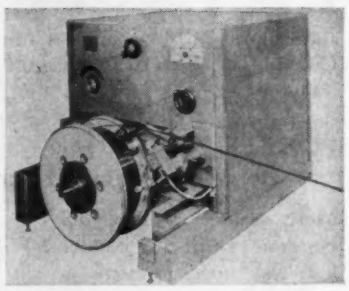
Magnetically operated, gold-plated contacts of Clareed reed relay are enclosed with an inert atmosphere inside a hermetically sealed glass capsule. Virtually free



of contamination, contacts have a life expectancy of over 100 million operations at ¼-amp, 28 v dc. Switch can be made to close with as little as ¼-w applied to the magnetic coil. It operates in as little as 0.8 milliseconds and releases in 0.25 milliseconds. Only 3¼ in. long, capsule affords space savings, especially when mounted in groups with a common coil, or on printed circuit boards. Relay withstands 40-g shock and operates in any position. • **C. P. Clare & Co.**, 3101 Pratt Blvd., Chicago 45, Ill.

For more details circle NED-682 D on enclosed inquiry slip

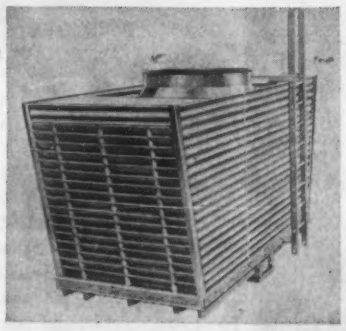
WIRE LAYER-WINDER
for flat or square wire



Speeds up to 1000 fpm are possible with the Acropak layer-winder for flat or square wire. Machine guides wire automatically during winding. Special tension guides lay the wire on reel, snug and even without overlaps or gaps. • **Acrometal Products, Inc.**, 616 N. Fifth St., Minneapolis, Minn.

For more details circle NED-683 D on enclosed inquiry slip

COOLING TOWER
features closed distribution system



Use of strong, lightweight materials in Keystone Lo-Line cooling tower has brought about savings in grillage and roof loads. Its closed distribution system prevents formation of algae and keeps dirt from blowing in and clogging distributors. Materials used include fanstack of thermally stable, corrosion-proof glass fiber-reinforced plastic, asbestos board and Corrulux blend casing in colors, and laminated wood panels impregnated with plastic cellulose fibers. The Air-Over motor withstands abuse of hot/wet air streams. Adjustable pitch fan has low noise level. Canted collecting pans wash debris into the depressed sump, assuring return of clean water. Two series for mechanical and absorption refrigeration service have capacities ranging from 79.8 to 1550 tons per cell. • **J. F. Pritchard & Co. of Calif.**, 4625 Roanoke Parkway, Kansas City 12, Mo.

For more details circle NED-684 D on enclosed inquiry slip

Step-up Production Line EFFICIENCY

Systems are available with speed reducing or increasing gears—with 12- or 24-hour disc charts or with 31-day strip-type charts.

with Wagner-Sangamo industrial Tachographs

Use these precision recording devices anywhere that the control of speed, time and measurement is essential to the quality of your products. They tell you how fast and long a machine is used . . . let you measure output versus time . . . fit in perfectly with quality control and time study programs . . . graphically record operation of one machine or entire automated line to help you determine production peaks and valleys, and non-productive time.

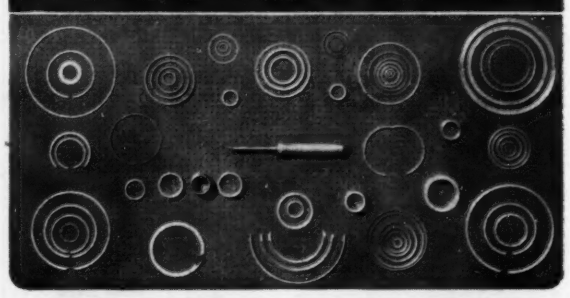
Consult your nearby Wagner Sales Engineer, or write us about your production recording problem. Wagner engineers will tell you if Tachographs will help you increase production efficiency.

W160-1

Wagner Electric Corporation
6435 PLYMOUTH AVENUE, ST. LOUIS 33, MISSOURI

For more details circle NED-685 D on enclosed inquiry slip

PISTON RINGS for every purpose



HYDRAULIC CYLINDERS
COMPRESSORS
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AND MANY OTHERS

Auto-Diesel has specialized in piston rings since 1921. We have but one thing to offer you—Quality Piston Rings—to your specifications—delivered on time—at attractive prices.

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Catalog on Request
THE AUTO-DIESEL PISTON RING CO.
3141 Superior Avenue • Cleveland 14, Ohio

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Speeds Vacuum Handling

Newest of Whiting Pressuregrip vacuum lifters, UNI-GRIP offers an economical way to cut machine feeding costs. Under one-man control, it lifts, spots, feeds objects as heavy as 2,000 lbs. . . . smooth surfaces or rough. Powerful single gripper is quickly changed to new size, or to multiple gripper bar. Reserve vacuum tank assures safety. Save manhours . . . cut handling costs! Write today for facts! *Whiting Corporation, 15660 Lathrop Avenue, Harvey, Illinois.*

WHITING W

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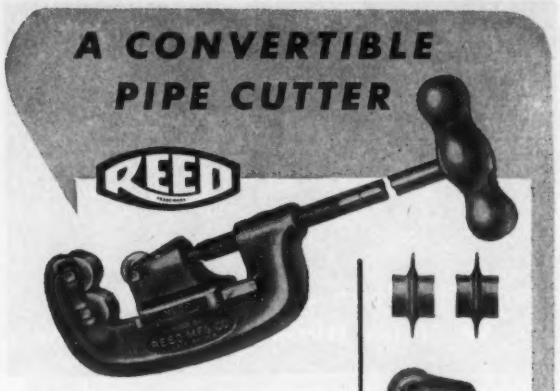
A CONVERTIBLE PIPE CUTTER



● Quick, easy change-over transforms Roller Cutter into a 4-wheel cutter for ditch and other close-area work. These new Reed cutters—whether in Roller, 3-wheel or 4-wheel models — are the world's easiest, cleanest cutting tools in their size ranges. Roller model has cutting wheel in block where it remains for full sight lining up with cut-off mark. Operating with easy, ratchet-like action through one-fourth of a revolution, Reed 4-wheel model is best for close quarters work. In three capacities for pipe sizes from ⅛" to 3". Razor Blade wheels by Reed leave minimum burr, cut easier.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

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There's an Easier Way!

Break away from old-fashioned cutting methods . . . save time, temper and patience. Now . . . zip through 3/16" aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel, with minimum effort . . . maximum speed . . . with the KETT Panel Master Saw. Its performance is outstanding on metal laminates such as Mirawal, Metlwal, Met-L-Wood and Amerply. 2½" diameter saw blades give full ⅝" depth cut. Leaves accurate, smooth milled edge that requires no sanding or finishing. Amazingly easy to use . . . extra rugged for long, hard service.

Powered by heavy duty, industrial type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.

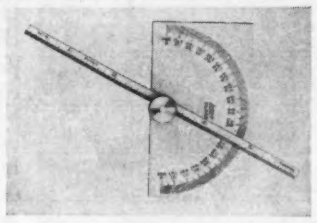
KS-3AM Panel Master Saw

Write for Catalog E-52

THE KETT TOOL COMPANY
5051 Madison Rd.
Cincinnati 2, Ohio

▲ For more details circle NED-689 D on enclosed inquiry slip ▲

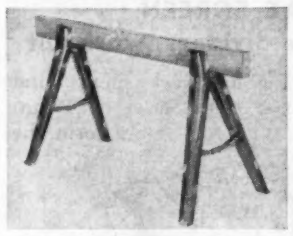
PROTRACTORS
have nonglare chrome finish



Setting bevels and transferring angles are applications for No. C891 and C892 Chrome Clad steel protractors. Nonglare corrosion resistant plated finish eases reading and contributes to long life. Graduated from 0 to 180 degrees, they have two rows of figures reading in opposite directions. Blade of No. C892 protractor is a 6-in., narrow pattern, machine divided rule, graduated in 1/32-in. increments on one side and 1/64-in. on the other side which also permits its use as a depth gage. Prices are $8.50 and $8.85, respectively. ● **Lufkin Rule Co.**, 1730 Hess St., Saginaw, Mich.

▲ For more details circle NED-691 D on enclosed inquiry slip ▲

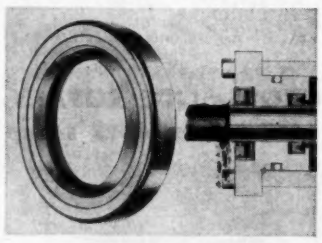
FOLDING SAWHORSE LEGS
self-locking type support 1000 lb



Riveted 16-gage steel construction and embossed, channel-shaped legs give self-locking sawhorse Port-A-Legs ample strength to support over 1000 lb. The folding legs extend to an 18-in. width, are offset for stability, and provide a 24-in. working height with a 2 x 4-in. crosspiece. Additional height is gained by using 2 x 6 or 2 x 8-in. crosspieces. Bright red legs weigh 10 lb and fold to 6 x 6 x 26 in. Price is $5.95 per pair. ● **Grip-Tite Mfg. Co.**, Box 111, Winterset, Iowa.

▲ For more details circle NED-692 D on enclosed inquiry slip ▲

ROD WIPER SEAL
for reciprocating shafts, cylinders



Rod wiper and scraper incorporated in the SC Wiper Scraper seal protects packings on reciprocating shafts and hydraulic cylinders exposed to heavy dirt conditions. Scraper removes frozen or caked mud, tar, and other materials on the rod. The seal consists of a thin brass scraper ring in tandem with a pliable Sirvene synthetic rubber wiping member, both clamped within a steel shell. Scraper ring aligns with off-center rods. Seal is stocked for ½ to 6-in. diameter shafts. ● **Chicago Rawhide Mfg. Co.**, Oil Seal Div., 1301 Elston Ave., Chicago 22, Ill.

▲ For more details circle NED-693 D on enclosed inquiry slip ▲

the exclusive

FLEX-A-FOAM DUST MASK

(no other product like it . . . anywhere)

Here's everything that management and worker alike could possibly want in a dust respirator!

1. **Form-fitting design:** Self-adjusting to any size and shape of face without pressure or irritating discomfort.
2. **Attractive styling:** Smartly designed to suit the most discriminating wearer.
3. **Filtering efficiency:** Filters non-toxic dusts 100 times smaller than the eye can see.
4. **Easy-breathing comfort:** Easier to breathe through and talk through than an ordinary pocket handkerchief.
5. **Feather-like weight:** Weighs only 1 ounce complete.
6. **Simplicity and economy:** Only 4 tough, long-wearing inter-locking parts — all washable. Pure latex filter outwears throw-away type more than 100 to 1.

No wonder FLEX-A-FOAM is the one dust respirator workers welcome and WEAR!

Sample only $1.45 postpaid (Industrial price only)

FLEX-A-FOAM® DUST MASK

FLEXO PRODUCTS, INC. • Westlake, Ohio

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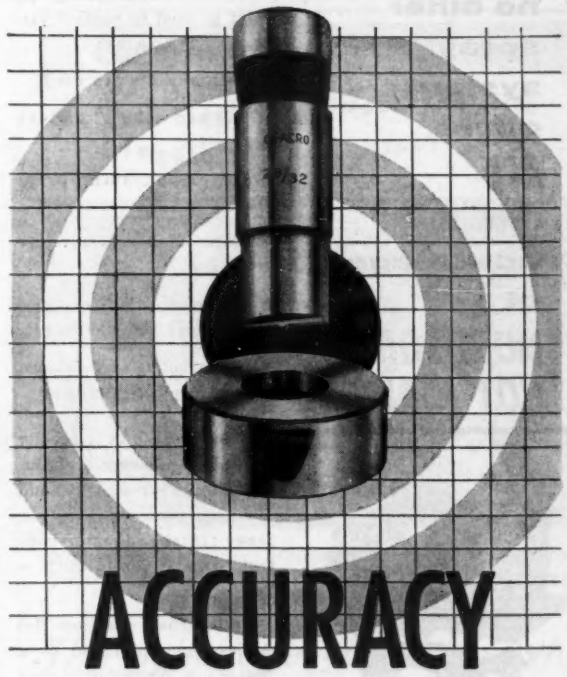
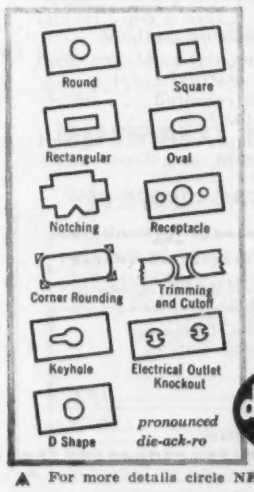


ACCURACY ASSURED

WITH DI-ACRO PRECISION PUNCHES AND DIES

Immediate Delivery from factory stock

Accurate hole location is easily achieved with Di-Acro Precision Punch and Die sets because the centering point on the punch is ground concentric to the cutting edges, there is no "slop" even when several holes are punched in a blank. Hole sizes are accurate due both to the high degree of concentricity of the punch and die set and the choice of clearance which allows you to obtain clean, burr free holes no matter what material thickness is to be perforated. All Di-Acro punches and dies are precision made of high quality tool steel.



For multiple hole punching ask about the new Di-Acro Adjustable Punch and Die Sets.

Over 500 standard sizes of Di-Acro Precision Punches and Dies in 12 standard styles are stocked. Punch Adapters and Die Holders are available to fit all styles of punch presses.

Consult the Yellow Pages of your phonebook under Machinery—Machine Tools for the name of your Di-Acro distributor or write us for catalog and price list.

See at Booth 805, ASTE Show

O'NEIL-IRWIN MFG. CO.

di-acro PRECISION METALWORKING EQUIPMENT

pronounced die-ack-ro

354 Eighth Avenue
Lake City, Minnesota

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STOPS RUST!

530% better than other widely promoted brands!

BRUSH OR SPRAY!

DRY IN 20 MINUTES! TOP COAT IN 2 HOURS!

Krylon Rust Magic penetrates deeper, dries faster, protects longer than other metal primers . . . earned a near-perfect 9.1 rating in ASTM method Rust Prevention Index tests . . . 530% higher than other leading brands! Penetrates rust in minutes . . . bonds itself to the metal . . . positively prevents further corrosive action. **Compatible with almost any finish . . . lacquers, enamels, varnishes, acrylics, epoxies, vinyls, latex, oil-base and water-base paints. At leading jobbers and paint stores everywhere—or write on your company letterhead for information.**

RUST MAGIC SUPERIORITY

BRAND A — RUST MAGIC

Metal panels subjected to extreme salt spray for 500 hours. Brand A shows severe blistering, underfilm corrosion, widespread lifting and creeping. Rust Magic panel film shows no defect or corrosion except where scribed through to bare metal.

KRYLON, INC., Norristown, Pa.

Since 1948 KRYLON has sold more aerosol paints than all other aerosol brands combined

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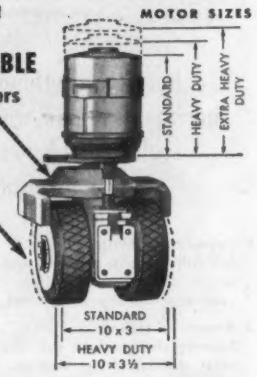
HydroLectric

the Modern Truck . . . with the Greatest Flexibility to Application

MAKE A COMPARISON



3 GEAR RATIOS AVAILABLE
without changes in Gear Centers

TWIN DRIVE WHEELS
Less than one half steering effort (compared to wide, single drive wheel).

★ Instantaneously braking with the handle in any position.

★ Maintenance simple and infrequent — designed to make it easy to service brushes, contacts, tires — within minutes.

THE EXCLUSIVE DYNA-DUAL POWER UNIT IS INTERCHANGEABLE ON ALL MODELS

LIFT TRUCKS, INC.
CINCINNATI 14, OHIO

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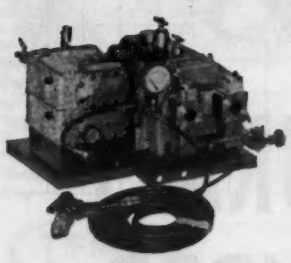
no other spray system offers ALL the advantages of NORDSON HOT AIRLESS

With Nordson Hot Airless, Heat is used to control viscosity. This means:

- Less solvents are used
- Higher solids may be applied
- Lower operating pressures – less over spray
- Paint savings of 30% are common
- Solvent flash-off and drying times are cut sharply
- Spray booth and exhaust costs kept to minimum



Heat control of viscosity also assures better flow out – eliminates orange peel and blushing, provides smoother, finer finishes, better control, greater uniformity – less rejects.

Let us show you how Hot Airless can help you do a better job. Write for further information,

NORDSON CORPORATION
72 Jackson St., Amherst, Ohio

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"THERMO-FAX" Copying Machines

the perfectly dry copying system

FAST . . . all-electric process makes a copy in just 4 seconds. The fastest of all copying methods.

CLEAN . . . no chemicals, no negatives. Makes clean copies directly from most any original.

SIMPLE . . . no special skills required . . . simply press the button—get a copy fast.

VERSATILE . . . simplifies paperwork throughout the office or plant in any system, any department.

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MINNESOTA MINING AND MANUFACTURING COMPANY
. . . where research is the key to tomorrow

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Minnesota Mining and Manufacturing Company
Dept. DBQ-40, St. Paul 6, Minnesota

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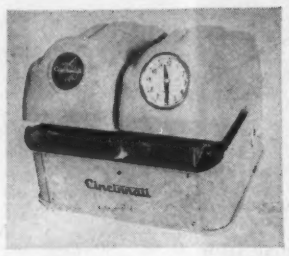
▲ For more details circle NED-700 D on enclosed inquiry slip ▲

PRINTING TIMER connects to equipment to be checked

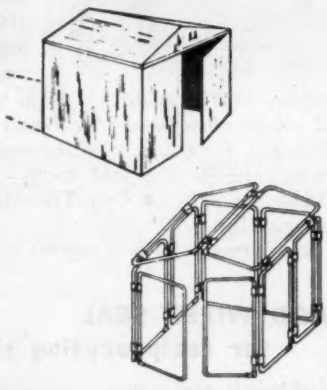


Operation timing of mechanical, electrical, hydraulic, and electronic equipment is performed by this electrically powered dual printing timer. It is permanently or temporarily connected to the machine to be checked. Left side of the desk top size portable timer accumulates the machine's running time in hours and tenths of minutes up to 99,999.9 hours. Right side is a time stamp which records the year, date, hour, and hundredths of a minute when the accumulated time record is made. Reprinted cards contain the time record. Copies on standard weight paper can be made. Power requirement is 110 v ac for both input and machine connection. • **Cincinnati Time Recorder Co.**, 1733 Central Ave., Cincinnati 14, Ohio.

▲ For more details circle NED-701 D on enclosed inquiry slip ▲

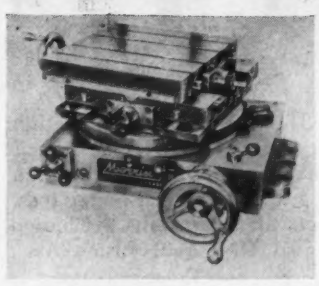
VERSATILE PORTABLE SCREEN panels also make dividers, work hut

A 6 x 6 x 7-ft Handi-Hut for work shelter and storage use can be assembled from Series 60 Porto-Screen components. Eight standard frames form the side walls and two frames form the top. Clamp hinges permit panel use as doors. Low cost wind screens, room dividers, and welding shields also may be assembled from the components. Steel tubing frames with UL-approved fabric curtains store compactly when not in use. • **Frommelt Industries**, Box 419, Dubuque, Iowa.



▲ For more details circle NED-702 D on enclosed inquiry slip ▲

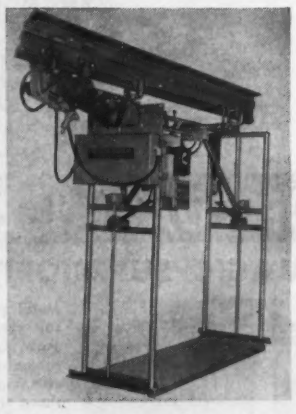
CROSS-SLIDE ROTARY TABLE speeds work setup for machining



Once workpiece is located and clamped on this worm-gear operated cross-slide rotary table, it is rarely necessary to move or reclamp the work until all cuts are complete. Table speeds setup time of stampings, forgings, cast dies, cams, templates, molds, tools, gages, models, fixtures, and boring and grinding jobs. Cross slides can be adjusted to position the work for cutting any radius whose center point lies within a 9-in. square area centered on the table. • **Morrison Machinery & Engineering Corp.**, 935 W. Lake St., Chicago 7, Ill.

▲ For more details circle NED-703 D on enclosed inquiry slip ▲

AUTOMATIC MONORAIL CARRIER also operates manually by buttons



Automatic material handling results when this monorail carrier is set up to travel automatically to any one of eight stations, stop for loading, then reset to return to the home station. Unit is propelled by a Mono-Tractor at 90 fpm over the electrified monorail which may include a power operated track switch and monorail track loop. It can be operated manually by push-buttons on the control panel. Carrier can be made to stop at any point by placing an obstruction in its path to cause its bumpers on either end to actuate a limit switch. • **American MonoRail Co.**, 1111 E. 200th St., Cleveland 17, Ohio.

▲ For more details circle NED-704 D on enclosed inquiry slip ▲

Sweep it, hose it or mop it—A. W. Super Diamond rolled steel floor plate has no pockets to hold dirt or water. Shear, form, weld and match this plate wherever necessary.

Super Diamond wears indefinitely, with no chipping, cracking or splintering. Feet get traction from *every* direction, even when plates are wet.

Readily available from warehouses. For safety . . . easy installation . . . long wear . . . specify A. W. Super Diamond. Write for Bulletin SD-S11.

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.
Also manufacturer of the world's only abrasive rolled steel floor plate—A. W. ALGRIP

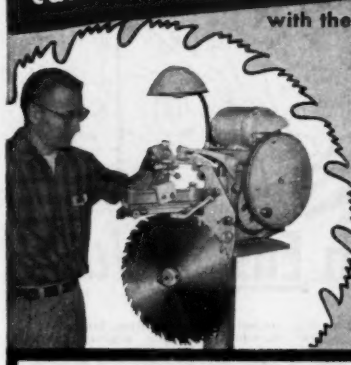
▲ For more details circle NED-705 D on enclosed inquiry slip ▲

COMBINATION SAWS can now be filed automatically

with the New MODEL 200

FOLEY Automatic SAW FILER

Also CROSSCUT CIRCULAR SAWS, BAND SAWS, HAND SAWS



This is the FIRST and ONLY machine which will file the so-called "combination" (rip and crosscut) circular saws; also crosscut circular saws, band saws, all types of hand saws.

The exclusive Foley principle of jointing the saw as it is filed, keeps teeth uniform in size, shape and spacing; keeps circular saws perfectly round, usually doubles saw life

30-Day Trial Offer. You may try the new Model 200 Foley Saw Filer in your own shop for 30 days. Write for literature and details of 30-day trial offer.

FOLEY MFG. CO. 3323 N.E. 5TH STREET MINNEAPOLIS 18, MINN.

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Now! MARK **NAME PLATES** 5 TIMES FASTER ...*and* SAVE...SAVE...SAVE!

WITH *Automark* ELECTRIC TAG MARKING TYPEWRITER ®

MODEL EMT-2

A NEW ERA IN NAME PLATE MARKING

Just a touch of the finger delivers up to 2 TONS pressure for deep, legible impressions on metal or plastic tags. Standard electric typewriter keyboard—over 100 characters a minute. A modern marvel!

SEND NOW FOR BULLETIN

DEFIANCE MACHINE & TOOL COMPANY
1920 S. VANDEVENTER Dept. QD ST. LOUIS 10, MO.

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▲ For more details circle NED-708 D on enclosed inquiry slip ▲

For HIGHEST ELECTRICAL & MECHANICAL Efficiency!

New JONES 2400 SERIES PLUGS & SOCKETS

Improved Socket Contacts. Four individual flexing surfaces. Position contact over practically their entire length.

Both Plug and Socket Contacts mounted in recessed pockets greatly increasing leakage distance, INCREASING VOLTAGE RATING.

Plug and Socket Contacts cadmium plated. Add to appearance of your equipment.

Interchangeable with Jones 400 Series.

P-2406-CCT plug—with cable clamp in top.

S-2406-SB Socket with shallow bracket for flush mounting.

Ask for Catalog 22, Complete line Jones Plugs, Sockets, Terminal Strips.

Jones HOWARD B. JONES DIVISION
CINCH MANUFACTURING COMPANY
CHICAGO 24, ILLINOIS
DIVISION OF UNITED-CARR FASTENER CORP.

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NEW PLATECOIL SPECIFICATIONS

Send for your free copy of Bulletin P-57, describing the revolutionary new MULTI-ZONE PLATECOIL. New specifications, with operating pressures up to 250 psi. New capacity ratings. New configurations to solve difficult tank and process heating and cooling problems.

PLATECOIL® DIVISION
LANSING 9, MICHIGAN
TRANTER MANUFACTURING, Inc.

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MAGNETIC SWEEPERS
strengths and sizes for many jobs

Additional and improved models in the Magni-Power line of permanent magnetic sweepers make available a wide range of strengths and sizes to meet most any job requirement. Sweepers range from the one-hand operated tube magnet types to large units for truck or tractor towing. They are effective in removing tramp iron from floors, aisles, driveways, parking lots, and loading areas. • **Magni-Power Co.**, Box 122, Wooster, Ohio.

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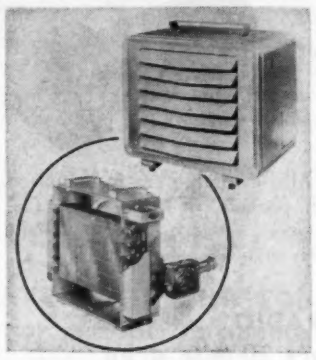
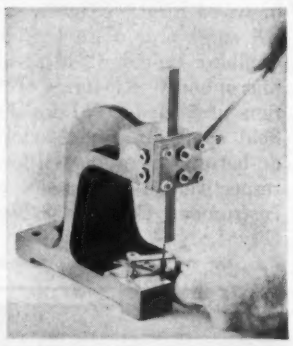
ELECTRIC UNIT HEATERS
have stainless heating elements



Heavy duty 600 Series Heetaire electric fan-forced unit heaters have capacities from 2 to 10 kw with 208, 240, 480, and 575 v in single and three-phase types. They have built-in or remote thermostats. Ceiling or wall mounting, or portable use are possible. Helically coiled nickel-chromium alloy resistance wire is embedded in magnesium oxide, then swedged into a stainless steel sheath to which are brazed stainless steel fins. Axial flow propeller type fans have low noise levels. One or more thermal cut-outs protect motors and elements if air supply is cut off. Heaters are UL and CSA approved. • **Markel Electric Products, Inc.**, 147 Seneca, Buffalo 3, N. Y.

▲ For more details circle NED-712 D on enclosed inquiry slip ▲

ARBOR PRESS
small unit exerts 2/5-ton force



Precision assembly and fabrication of instruments, miniaturized parts, and electronic components can be performed with the Micro-Press M-100 miniature arbor press. It has steel moving parts, cast iron frame, adjustable front and side gibs for alignment, and a ground 2.5 x 1.5-in. working surface. Stroke is 2½ in., throat opening is 2½ in., and rated working force is 2/5 ton. Standard or special tooling suits it for shearing, dimpling, drawing, broaching, riveting, blanking, setting of jewels, and other operations. A dial indicator adapts it for precision depth control. The 5-lb unit sells for $32. • **Dickinson & Associates**, 940 Alma St., Glendale 2, Calif.

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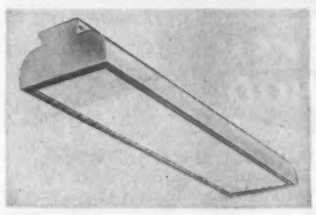
FLUORESCENT FIXTURES
free from spurious electrical noise



Fluorescent light fixtures that are free from radio interference are available in two standard sizes, both using standard fluorescent lamps. A light transparent, electrically conductive film permanently bonded to one side of a heat resistant borosilicate glass lens is grounded to shielded metallic fixtures. Radiated and conducted radio interference is within limits of MIL-I-16910A specification for use in electronic laboratories, computer facilities, and other uses. Dual 40-w and dual 75-w fixtures are 4 and 8 ft long respectively. Relamping is without tools. Light transmittance is about 74 per cent. • **Ender-Monarch Corp.**, 141 Lanza Ave., Garfield, N. J.

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Matched hardware for all-around pressure on hinged-cover containers!

LINK-LOCK provides high-strength, pressure-tight seal without springs. A half-turn disengages for opening.

HINGE-LOCK permits application of sealing pressure along hinge line; becomes free-operating hinge when released.

SEND TODAY for complete information.
Engineering service available • Samples on request

SIMMONS FASTENER CORP.
1793 North Broadway, Albany 1, New York

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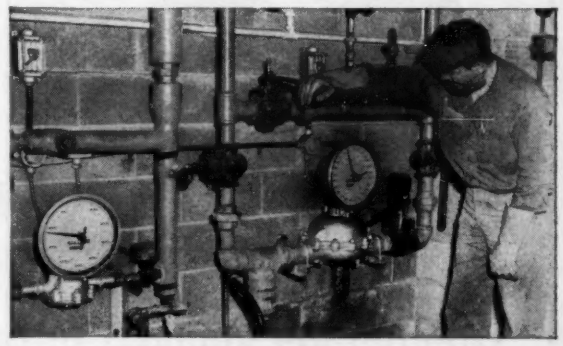
Complete Batch Uniformity

When Liquids are measured with Niagara Electricontact Meters



Niagara Electricontact Meters being used to simultaneously meter sodium hydroxide (right) and water (left) in a large eastern chemical plant.

The gallonage you set is what you get . . . EXACTLY!

Whatever your process — if you measure, meter, control or add liquids, you can be sure of absolute batch or process uniformity with Niagara Electricontact Meters.

Exacting accuracy is assured by positive displacement Niagara metering. When the required volume has passed through the meter, the flow is automatically stopped by a solenoid valve activated by the meter itself. There is no possibility of human error. Dirty sight glasses offer no problem.

Time and labor are saved. The central control station shown above permits the operator to accurately measure the dilution of caustic soda to precise process requirements without leaving his station. Since he never has contact with the caustic, the entire process is carried out in a safer fashion. Obsolete methods of dipping, rodding are a thing of the past with Niagara Meters.

Why not let us show you how Niagara Meters can improve your process? Mail the coupon today for a free catalog.

BUFFALO METER COMPANY
INCORPORATED
Subsidiary of American Meter Company, Inc.
2903 Main Street • Buffalo 14, New York

BUFFALO METER COMPANY, Inc.
2903 Main Street, Buffalo 14, N. Y.
☐ Please send me additional information on Niagara Meters.
☐ Please have representative call.
NAME
ADDRESS
CITY and STATE

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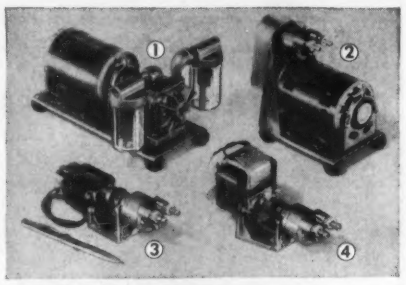
NOW!

2 types — 3 capacities — from .35 to 1 c.f.m. — up to 24" vac. or 25 p.s.i.g. Choice of motors; a.c. and d.c.



GAST OIL-LESS MINIATURE VACUUM PUMPS — COMPRESSORS

For Controls, Instruments, Lab and Business Machines

Have a portability problem? Or limited space? You can provide moderate vacuum or pressure of surprising capacity with these compact Gast Air Pumps! They're completely oil-less. Carbon vanes lubricate themselves. *Air is oil-free!* Positive displacement rotary design is simple and dependable. Numerous motor choices:

(1) Model 1030 (also 0630), 1/12 or 1/20 h.p. split phase.
(2) Model 0330, belted to 1/20 h.p. split phase a.c.
(3) Model 0330, direct coupled to series motor a.c. or d.c.
(4) Model 0330, coupled to shaded pole motor a.c.

If your products require compact, light weight components, investigate Gast semi-miniature Air Pumps!

WRITE TODAY FOR BULLETIN M-OVP

Gast Manufacturing Corp., P.O. Box 117-R Benton Harbor, Mich.

GAST ROTARY — "Air may be your answer!" • AIR MOTORS TO 7 H.P. • COMPRESSORS TO 30 P.S.I. • VACUUM PUMPS TO 28 IN.

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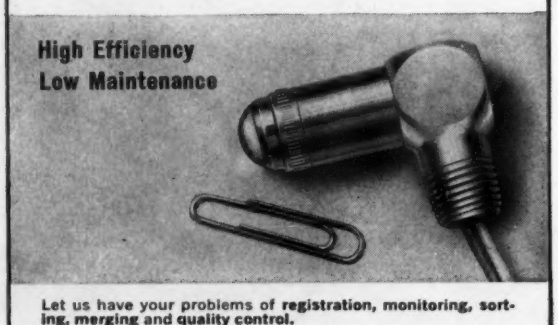
YOU name it... PHOTOMATION can do it!

Miniature "ELECTRIC-EYES"



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A strategic network of outside field engineers is available for recommendations and quotes on your particular production problem. In some cases delivery can be made from on-hand stock.

Write for descriptive material — or — send us a sample of the product for laboratory testing.

• Serving Industry for Over a Quarter Century

Photomation inc. 96 SOUTH WASHINGTON AVE., BERGENFIELD, NEW JERSEY — ELECTRONIC INSTRUMENTS and CONTROLS for INDUSTRY

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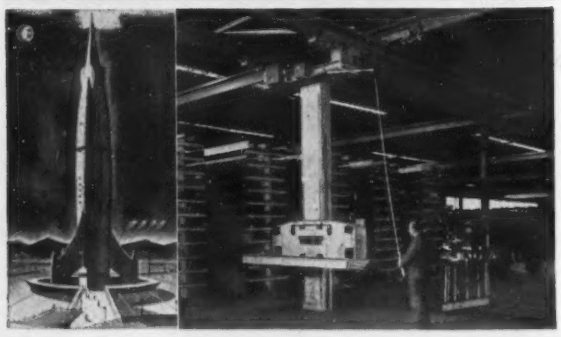


why worry about outer space?

let AMERICAN MONORAIL EXPLORE YOUR INNER SPACE

Space in your plant is valuable — particularly storage space.

By reducing aisle requirements for moving loads and by utilizing maximum stacking heights, the American Monorail "Stacker" brings accessible storage to the greatest possible cubic area in your warehouse.

Find out how American Monorail overhead handling can cut costs for you.

Write for Bulletin C-2.

AMERICAN MONORAIL 1116 E. 200th STREET CLEVELAND 17, OHIO

▲ For more details circle NED-719 D on enclosed inquiry slip ▲

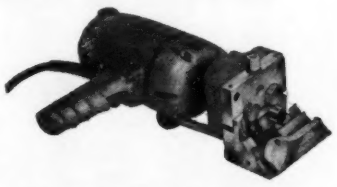
INSPECTION MAGNIFIER illuminated by batteries in handle

Seven-power Micro - Lite magnifier is suited for inspection of all surfaces. Its 1 3/16-in. diameter double lenses provide a brightly lighted, sharp image over the entire field. Base plate has a 1 x 1-in. opening with white edge rulings in both inches and millimeters. Removing the base gives a 2-in. diameter circular field. Magnifier is 7 in. long, uses two standard flashlight batteries, and has a felt-lined hardwood case. Price is $9.95. • **Litho Research, Inc.,** 14339 36th Ave. N.E., Seattle 55, Wash.

▲ For more details circle NED-720 D on enclosed inquiry slip ▲

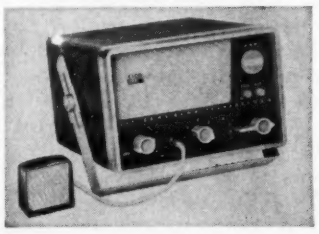
PORTABLE LOCK SEAM ROLLER closes sheet metal seams on the job

Ductwork and other sheet metal lock seams are closed quietly and efficiently on the job with this Lectro-Lok Pittsburgh portable electric seam roller. Seams are rolled tight and smooth without hammering. Tool can be used on 18 to 28-gage metal at speeds from 18 to 30 fpm. Price is $225 with slide for 5/16-in. pocket seams. Also available are interchangeable slides for 3/8 or 1/2-in. pockets. • **Millers Falls Co.,** Greenfield, Mass.



▲ For more details circle NED-721 D on enclosed inquiry slip ▲

CITIZENS BAND RADIO 5-w unit covers 20-mile area



Communications between vehicle and station, or between stations, is easily set up with the EICO 760 Transceiver, a 5-w transmitter - receiver which operates on any of 23 citizens band channels to cover a 20-mile area. Unit is as easy to operate as an intercom and is available either in kit or wired form. It has a superheterodyne receiver with RF stage and noise limiter, preset and sealed crystal oscillator, and built-in speaker and detachable ceramic microphone. Kit-forms of Model 760, for 117-v ac station use; Model 761 for 117-v ac and 6-v dc battery field operation; and Model 762 for 117-v ac and 12-v dc battery operation sell for $59.95, $69.95, and $69.95, respectively. Wired models are $30 higher. • **Electronic Instrument Co.,** 33-00 Northern Blvd., Long Island City 1, N. Y.

▲ For more details circle NED-722 D on enclosed inquiry slip ▲

whatever you mark... save money, time and material with a **MARKEM METHOD**

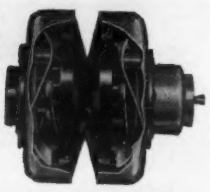
Whether you mark materials, parts, products or packages, there's a Markem machine ready to bring low cost, high production identification or decorative marking to your plant. From plastics to fabrics . . . transistors to camera parts . . . multi-color decorative marking to high production offset marking — there's a *Markem Method* to meet your marking needs. One source, with 47 years of experience in all industries, can supply the machines, type, inks, accessories and service you need. For complete information, write Markem Machine Company, Keene 3, New Hampshire.

MARKEM

EVERYTHING INDUSTRY NEEDS . . . FOR PROFITABLE MARKING . . . SINCE 1911

▲ For more details circle NED-723 D on enclosed inquiry slip ▲

Hi-Lo Load-O-Matic Control Eliminates Pulley Slow Down

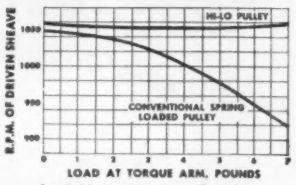


Hi-Lo Variable Speed Pulleys positively maintain the desired speed ratio over a wide range of load variation by means of an exclusive cam and cam follower assembly. This means: Pulley speed is independent of load and load changes. "Drag" is eliminated and high shock absorbency provided.

Pulleys do not compress belt due to spring pressure. Springs are not driving members. They act only to keep pulley faces in contact with belt.

Pulleys automatically regulate belt tension. Because of the cam assembly, belt is never under more tension than required by the load. Double cams maintain constant belt alignment.

HI-LO PULLEYS COMPARED TO OTHER VARIABLE SPEED PULLEYS



Available in sizes from .5 to 5 hp., ratios to 2.5/1 (single pulley) 6.25/1 (double pulley).

Request details and prices. Ask for Bulletin A-458

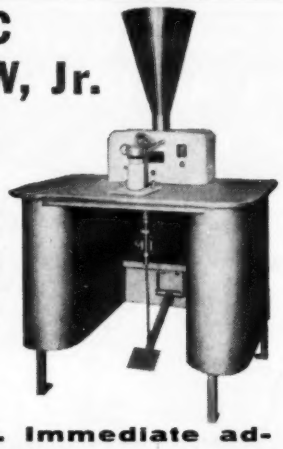
Manufactured By HI-LO MANUFACTURING COMPANY

Nationally Distributed By LOVEJOY FLEXIBLE COUPLING COMPANY 4953-H W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-724 D on enclosed inquiry slip ▲

PNEUMATIC VACUFLOW, Jr.

SEMI AUTOMATIC DUSTLESS POWDER FILLING



Great flexibility. Immediate adjustment to different densities. Switches from non-pulsating to tamping action, at will.

PNEUMATIC SCALE CORP., LTD., 71 Newport Ave., Quincy 71, Massachusetts. In: *New York,* 117 *Liberty Street; Chicago,* 360 *No. Michigan Avenue; Dallas,* 318 *No. Pearl Street; Rochester,* 709 *Monroe Avenue.* Also: *Fred Todt Co.:* 2021 *South Hill Street, Los Angeles;* 1485 *Bayshore Blvd., San Francisco;* 105 *Orcas Street, Seattle.*

PNEUMATIC — *Packaging and Bottling Equipment*

▲ For more details circle NED-725 D on enclosed inquiry slip ▲

Exclusive **POW-R-GRIP*** Ridges!

Anchor anything to concrete...permanently

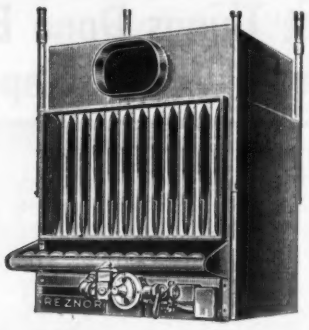
BULLDOG Gold Digger®

*POW-R-GRIP ridges around the shank of the BULLDOG "Gold Digger" drill/anchor permit *faster, easier drilling* into hardest concrete, brick or stone. Once the drill/anchor is set, these powerful ridges, plus the proven expansion principle of "Gold Digger" drill/anchors, assure greatest holding-power under all job and climatic conditions. Only POW-R-GRIP ridges assure "the grip that never fails".

Send for full details today! *Free* specification and application booklet on BULLDOG "Gold Digger" drill/anchors available on request.

BULLDOG DIVISION (Formerly Polis Manufacturing Co.) GREGORY INDUSTRIES, INC. 102-22 Toledo Avenue • Lorain, Ohio

▲ For more details circle NED-726 D on enclosed inquiry slip ▲



TOUGH BUYERS DEMAND

REZNOR stainless steel

DUCT FURNACES

The tough buyer thinks ahead. He worries about possible trouble-makers like corrosion in air-conditioning, make-up or ventilation air systems. That's why he insists on Reznor stainless steel heat exchangers and burners, the kind that *can't* corrode.

Capacities of 50,000 to 300,000 Btu. Use multiples for greater heat requirements. Matching blowers also available. Write for catalog.

REZNOR Manufacturing Co., Dept. 41-E, Mercer, Pa.

▲ For more details circle NED-727 D on enclosed inquiry slip ▲

Make Savings like these

WITH SALT BATH HEAT TREATING!

These are typical instances of savings made by prominent manufacturers who have replaced previous heat treating methods with Ajax Salt Bath Furnaces—and there are hundreds more!

SPROCKET HARDENING COSTS CUT 75%! . . . By spinning sprockets in an Ajax electric salt bath to harden teeth and roots, then spinning them again to quench, a Midwest manufacturer cut heat treating costs 75%—while scoring a remarkable improvement in penetration and uniformity.

300% INCREASE IN WIRE PATENTING POUNDAGE! One producer now handles 2500 lbs. of wire an hour in an Ajax salt bath compared to only 800 lbs. by a previous method. No other method offers such outstanding possibilities for quality improvement in patenting high- and medium-carbon steel wire or rods!

$37,000 WAS SAVED in 8 months by an Ohio manufacturer using an Ajax Salt Bath installation for 4 different cost-cutting operations: carburizing; brazing; simultaneous carburizing and brazing; and hardening.

A 60% COST REDUCTION in case hardening body screws was obtained with a single Ajax Salt Bath furnace no larger than your desk but handling 390 lbs. of work an hour.

A 350% PRODUCTION INCREASE in 45% less space with 50% less labor was achieved in carburizing bearing races in a 6-unit Ajax electric salt bath installation.

AJAX SALT BATH furnaces Internally heated. Electric and gas-fired types

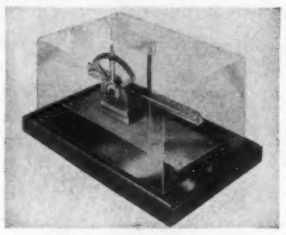
WRITE for details on any of these salt bath applications (specify which): Hardening; Annealing; Martempering; Austempering; Aluminum Brazing; Cleaning; Scaling; Carburizing; Cyaniding or other.

Write for "Salt Bath Success Stories" for complete list.

AJAX ELECTRIC COMPANY
103 Allen Street
PHILADELPHIA 23, PA.

▲ For more details circle NED-728 D on enclosed inquiry slip ▲

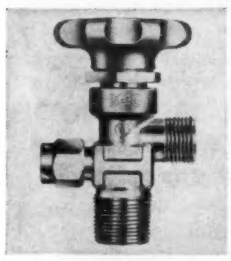
SPRING TORQUE TESTER for instrument hairsprings



Direct readings are made on the millimeter scale of the Torsiometer, for checking instrument hairspring torque by moving the milligram weight. Instrument operates on the balance principle, with the spring "zeroed in," then loaded up to 100 degrees. Weights determine the calibration accuracy. The arm moves only in a 5-degree arc to minimize friction. • **Gerbet Hairspring Co.**, 59 Bridge St., Thomaston, Conn.

▲ For more details circle NED-729 D on enclosed inquiry slip ▲

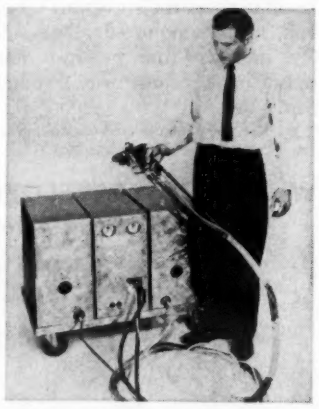
CYLINDER VALVE is lightweight, low height unit



UL-listed RegO 850 Series cylinder valve is less than 4 3/16 in. high and is 20 per cent lighter than previous models. Features include ample clearance through use of uplift handwheel, nylon packing, automatic takeup, and proven safety devices. Special symbols or name can be embossed on body. It has 1⅛-in. wrench flats and ½, ¾, or 1-in. inlet threads. Choice of outlets is offered. • **Bastian-Blessing Co.**, RegO Div., 4201 W. Peterson Ave., Chicago 46, Ill.

▲ For more details circle NED-730 D on enclosed inquiry slip ▲

SPRAYING-FOAMING EQUIPMENT for multiple component materials



Spraying, pouring, or foaming of epoxies, alkyds, polyesters, urethanes, and other multiple component materials are functions of the Turbulator gun and Formulator. Gun combines the plural component materials internally and dispenses the combined ingredients in pouring or spray forms. It requires 80 psi air at 30 cfm and has a capacity of 10 lb per minute. The Formulator is a wheel-mounted proportioning machine which automatically controls the volume rate delivery of the fluid streams. It operates on 220-v three-phase current and is coupled to the gun by hoses. • **Binks Mfg. Co.**, 3114 Carroll Ave., Chicago 12, Ill.

▲ For more details circle NED-731 D on enclosed inquiry slip ▲

HOW TO MAKE **LINKAGES** with Self-Aligning **ROD ENDS**

HEIM *Unibal*® SPHERICAL BEARING **ROD ENDS**

Many combinations possible with male and female threaded units. They compensate for misalignment.

There is practically no limit to the length of linkages possible by using appropriately threaded extension rods.

Send for Catalog #100

THE HEIM COMPANY
800 SANFORD STREET, FAIRFIELD, CONN.

▲ For more details circle NED-732 D on enclosed inquiry slip ▲

HOLZ Vulco-Lagged PULLEYS

GRIP BETTER to keep traction **UP**

DRIVE HARDER to keep production **UP**

WEAR LONGER to keep profits **UP**

HOLZ Vulco-Lagged PULLEYS step up performance and eliminate seasonal maintenance to save you dollars and downtime! Tough, abrasion-resistant lagging of specially compounded rubber is permanently bonded to metal pulleys for positive, non-slip driving. Pulleys run longer without re-lagging*; belts run longer without renewing! Have lagging applied to **your** pulleys, or order **HOLZ Vulco-Lagged Pulleys** complete. Write for detailed information today.

*Up to 10 years operation reported on HOLZ Pulleys.

VULCO-LAG PULLEY

"IF IT'S RUBBER, WE CAN MAKE IT!"
SERVING INDUSTRY FOR A QUARTER CENTURY

HOLZ RUBBER COMPANY, INC.
1135 SOUTH SACRAMENTO STREET • LODI, CALIFORNIA
Dealer inquiries solicited.

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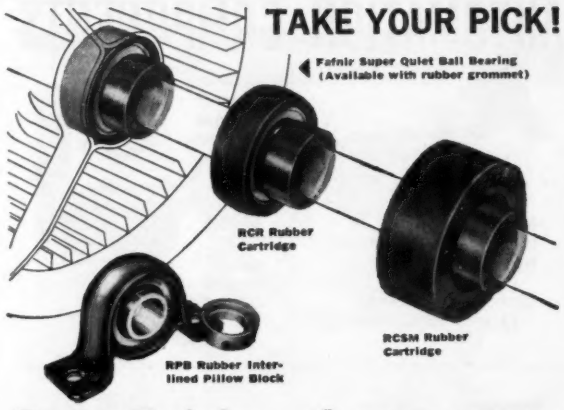
TAKE YOUR PICK!



From Fafnir. . . 4 easy ways to modernize home heating/cooling equipment!

Fafnir Super Quiet Ball Bearings and rubber-cushioned ball bearing units are specifically designed and sized to simplify modernization of home heating and cooling equipment. They are made to fit standard cold rolled shafts and mounting brackets, for easy change-over from plain bearing design. All units are permanently prelubricated and equipped with the Fafnir-originated self-locking collar. No adapters or other mounting accessories needed. Write for bulletin. The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL BEARINGS

▲ For more details circle NED-734 D on enclosed inquiry slip ▲

YODER SLITTERS

Engineered for Accuracy, Speed, Easy Operation

Send today for Yoder's 76-page, fully-illustrated book, "Multiple Rotary Slitting Lines". It covers operating techniques, time studies, operating cycle analyses, coil handling, scrap disposal, and setting up of complete slitting lines. Lists advantages of slitting and how to compute "profit-point".

THE YODER COMPANY
5547 Walworth Avenue • Cleveland 2, Ohio
Please send my copy of Yoder's "Multiple Rotary Slitting Lines"

NAME_____
COMPANY_____ POSITION_____
ADDRESS_____
CITY_____ STATE_____

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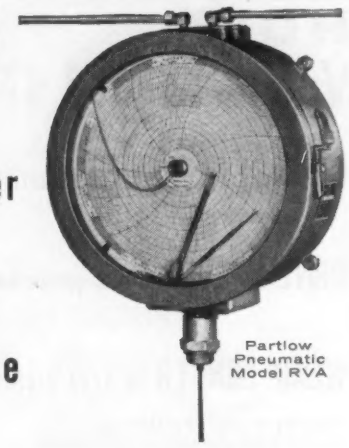
NOW!

Accurate Hair-Trigger Response in a Pneumatic Temperature Control!



Partlow's new pneumatic temperature control couples the powerful, direct action of mercury to that of a simple, air-operated valve system. Accurate to 1% of scale. Range: -30° to 1100° F. Rugged and explosion-proof—no electronic gadgets to go awry. Has adjustable throttling range; easy on-the-spot maintenance.

For details write Dept. N-460
The Partlow Corporation, New Hartford, N.Y.

PARTLOW
TEMPERATURE CONTROLS

▲ For more details circle NED-736 D on enclosed inquiry slip ▲

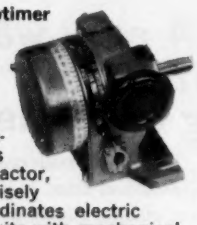
AUTOMATION COMPONENTS

Miniature photoelectric scanner for medium range (5 inches to 12 feet) and for short range (1 inch to 48 inches)

General purpose electronic timer

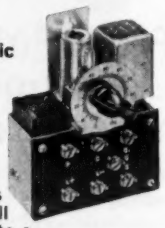
Model 120 seven modes of operation, including repeat cycle timing.

Rototimer



Synchronous contactor, precisely coordinates electric circuits with mechanical systems.

Electronic relay



Model CK picks up impulses too small to operate a mechanical relay directly.

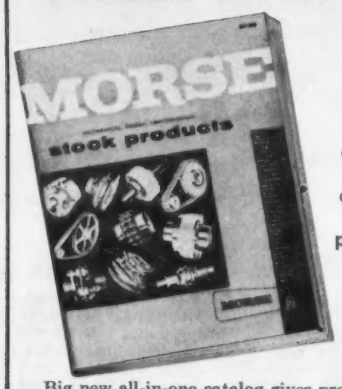
All components available from stock.

Write for bulletins containing full details.

FARMER ELECTRIC
Products Company, Incorporated
2300 WASHINGTON ST. NEWTON LOWER FALLS, MASS.

▲ For more details circle NED-737 D on enclosed inquiry slip ▲

FREE! NEW MORSE STOCK PRODUCTS CATALOG



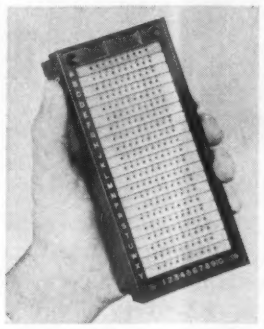
Gives selection and pricing data on all mechanical power transmission products

Big new all-in-one catalog gives properties and features, selection tables, and costs for Morse roller, double pitch, and silent chain . . . flexible couplings . . . torque limiters . . . cam clutches . . . and other Morse power transmission equipment.
Write today for Catalog SP-59 to MORSE CHAIN COMPANY, DEPT. 19-40, ITHACA, N.Y. A Borg-Warner Industry. Export Sales: Borg-Warner International, Chicago 3, Illinois.

MORSE BW
A BORG-WARNER INDUSTRY

▲ For more details circle NED-738 D on enclosed inquiry slip ▲

STATIC CONTROL
switching rate is 25,000 per second



All logic functions, including and, or, not, and memory, are performed by the color-coded Norpak static control, easily applied to conventional circuits. The static system is based on the transistorized Nor unit. Switching rates up to 25,000 per second are possible. Packaged, space-saving logic element modules are encapsulated for resistance to shock and environment. Norpak components can be purchased separated in 6 or 20 packs, and are applied as desired without regard to phase sensitivity. Units are also available in large or small engineered systems. Optional monitor lights give visual indication of proper performance. Simple dynamic sequence tester checks individual Nor units in operation. • **Square D Co.**, 4041 N. Richards St., Milwaukee 12, Wis.

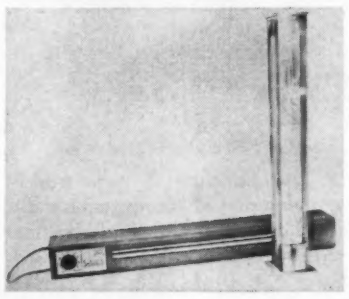
▲ For more details circle NED-739 D on enclosed inquiry slip ▲

VERTICAL ENGINE
exceptionally quiet in operation

Flyball mechanical governor incorporated in this Lauson low-silhouette lawnmower engine not only quiets the sound of its operation, but matches engine power output with power need. Engine vibration has been reduced by lowering the flywheel and magneto, and bringing them closer to the center line of the engine. Engine is offered with "sure-start" impulse, side mounted recoil, or top mounted recoil starters. It is as much as 2¼ in. lower than previous models. • **Tecumseh Products Co.**, Lauson-Power Products Engine Div., Tecumseh, Mich.

▲ For more details circle NED-740 D on enclosed inquiry slip ▲

WHITEPRINT DEVELOPER
prints made in a few seconds

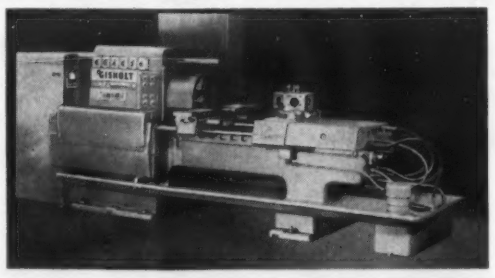


Transparent polyvinyl chloride square developing tube for making whiteprints enables the operator to see the developing process. Prints are made in a few seconds in the tube which has five developing areas, a removable cap for loading from either end, and a square ammonia cartridge with wide mouth. The 30 x 4-in. unit is usable with the Satellite white printer, a 30-lb wall mounting or table mounted unit which sells for $199. • **Grico, Inc.**, 1279 Munroe Falls Ave., Cuyahoga Falls, Ohio.

▲ For more details circle NED-741 D on enclosed inquiry slip ▲

CHUCKING TURRET LATHE
has fast setup, automatic operation

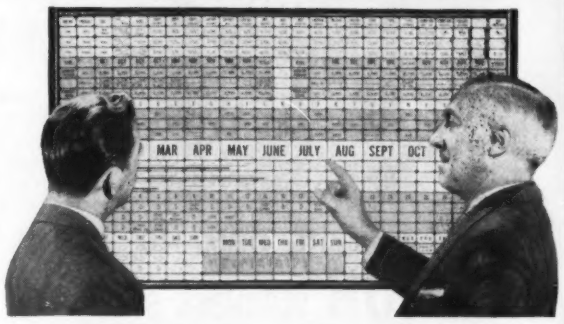
With the Masterline 3F Fastermatic automatic chucking turret lathe, operator need only chuck the work, start the automatic cycle, and remove the completed



part. Toggle switch electrical panel permits preselection of machine functions and speeds, and a new meter-out hydraulic control system allows preselection of feeds for each hexagon turret station. Setup time is reduced to a minimum. For most work, feed and speeds can be selected in 15 min. The automatic cycle frees the operator for handling additional machines and eliminates possibility of human error. • **Gisholt Machine Co.**, 1245 E. Washington Ave., Madison 10, Wis.

▲ For more details circle NED-742 D on enclosed inquiry slip ▲

You Get Things Done Better By Seeing What's Happening



BOARDMASTER VISUAL CONTROL

★ Gives Graphic Picture of Your Operations in Color.
★ Facts at a Glance - Saves Time and Prevents Errors.
★ A Simple, Flexible Tool - Easily Adapted to Your Needs.
★ Easy to Use. Type or Write on Cards, Snap on Board.
★ Ideal for Production, Scheduling, Sales, Inventory, Etc.
★ Compact, Attractive. Made of Metal. 500,000 in Use.

Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-200 Without Obligation

GRAPHIC SYSTEMS, Yanceyville, North Carolina

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UP... WITH SAFWAY 1-MAN MOTO-LIFT

self-elevating work tower comes in battery-operated and 110-volt plug-in models

ROLLS to the job on swiveling casters.
RISES to 17 ft. in 40 sec. (foot-button control).
TELESCOPES to clear 30" x 6'8" doors.
ONE-MAN operation.
SAFE at all levels.

WRITE FOR FREE BULLETIN 74N

SAFWAY

SAFWAY STEEL PRODUCTS, INC., 6228 W. STATE ST., MILWAUKEE 13, WIS.

▲ For more details circle NED-744 D on enclosed inquiry slip ▲

45-ton Grinder installed on stays level to .0005"

Norton Grinder on 26 Air-Loc mounts keeps its precision level. Vibration absorption by mounts eliminates chatter marks on finished work.

Permanent precision installation is yours with patented AIR-LOC mounts that:

Resist oil, water and alkali — *Hold* machines in place
Permit easy shimming — *Reduce* transmitted vibration
Eliminate need for bolts or cement

— and Air-Loc mounts can be re-used when you move machines.

Air-Loc samples will be sent promptly if you write direct to the manufacturer:

AIR-LOC DIVISION
CLARK CUTLER McDERMOTT CO., FRANKLIN, MASS.

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select from the widest range . . .

PERFORATED

METALS - PLASTICS FIBRE BOARD

for every purpose

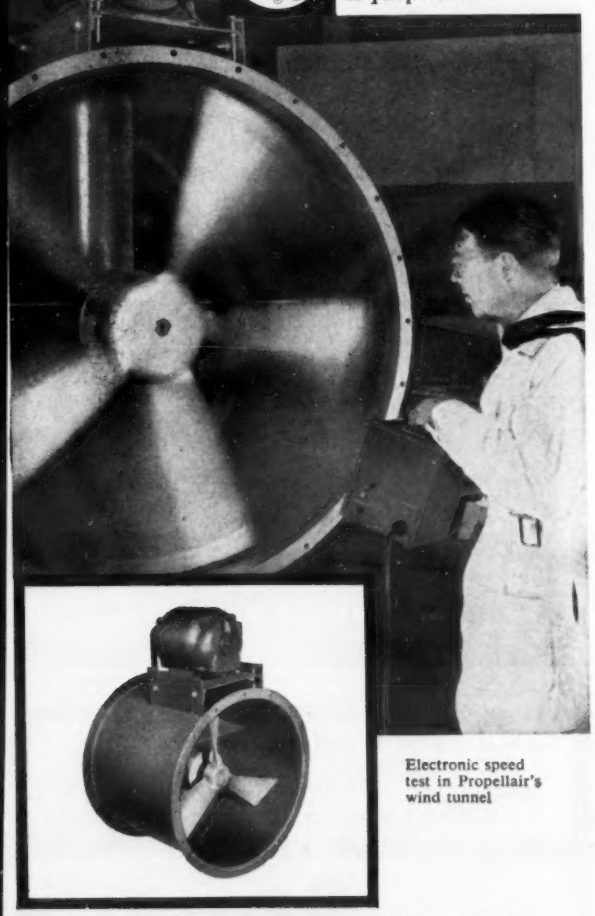
Round, Square, Slotted
Perforated Grille
Louvres
Decorative Metals

Many standard round perforations, grilles and decorator panels in stock for immediate shipment.

NATIONAL PERFORATING CORPORATION
42 Parker Street
Clinton, Massachusetts

▲ For more details circle NED-746 D on enclosed inquiry slip ▲

PROPELLAIR®
Ventilating Equipment



Electronic speed test in Propellair's wind tunnel

FOR RUGGED DUTY... NEW design axial fans *in sizes up to 60 inches!*

Move corrosive or explosive fumes, extreme heat or high humidity with new PROPELLAIR Type BT belt driven axial fans. They feature heavy 10 and 12-gage drums . . . isolated, air-cooled, protected bearings and belts . . . airfoil propellers cast of hi-strength aluminum-magnesium alloy . . . Robbins & Myers *"All-Weather"* motors for a single nameplate guarantee on the complete unit.

Hi-pressure, big hub propellers are available for those tough applications developing high resistance.

Send today for complete information on this modern, efficient fan. Ask for Bulletin 620—NE

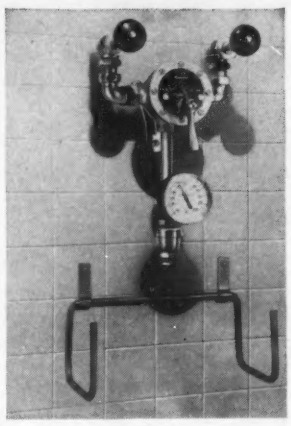
PROPELLAIR®
Div. of Robbins & Myers, Inc., *Springfield, Ohio*

DIRECT CONNECTED · SKY-BLAST® ROOF VENTILATOR · TUBEAXIAL and VANEAXIAL · EXTENDED SHAFT · BELT DRIVEN · MAN COOLERS

MOVING AIR IS OUR BUSINESS®

▲ For more details circle NED-747 D on enclosed inquiry slip ▲

HOSE STATIONS
mix and blend steam and water



Thermostatic steam and water mixers and manually operated steam and water blenders are two types of hose stations available for delivering hot water at controlled temperatures. Former (illustrated) is powered by Duratrol bi-metal thermostat and mixes hot water, cold water, and steam in different combinations to deliver water at temperature set with single regulator handle. Blenders are manually operated to desired temperature and volume and mix cold water with hot water or steam. • **Leonard Valve Co.**, 1360 Elmwood Ave., Cranston 7, R. I.

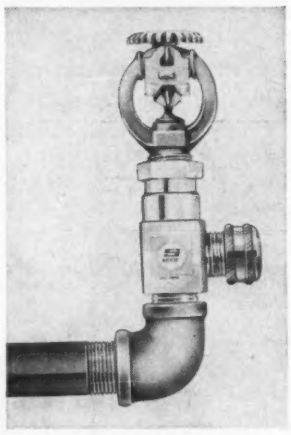
▲ For more details circle NED-748 D on enclosed inquiry slip ▲

SOLID PROPELLANT GYRO
spins at up to 36,000 rpm

Speeds up to 36,000 rpm are attained by this small, lightweight Pyrotechnic Gyro, rotor of which is spun by hot gases from an electrically ignited solid propellant charge. Rotor reaches top speed within 0.1 sec and performs effectively for a period greater than 1 min. Both rate and free gyro types have maximum rotor angular momentum of 3.5 x 10^5 gm cm^2 per second. Drift rate of free gyro is 3½ degrees during first minute, whereas rate gyros are made with a full scale range of 75 degrees per second after ignition, rising to 130 degrees per second after 1 min of operation. Undamped natural frequency is 33 cps. Units weigh 0.5 lb. • **Giannini Controls Corp.**, 918 E. Green St., Pasadena 1, Calif.

▲ For more details circle NED-749 D on enclosed inquiry slip ▲

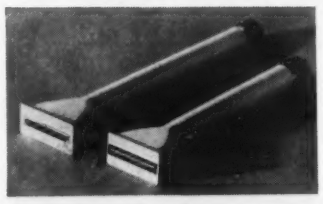
SPRINKLER SYSTEM TESTER
determines branch line condition



Rapid testing of fire protection sprinkler systems without shutting down the system is possible with the Seco Line Tester. Flow tests for branch line obstructions are made by removing the side outlet cap, connecting a hose, and turning the hex head to "open" position. Factory Mutual approved tester is permanently installed in either new or existing systems. • **Seco Mfg., Inc.**, 4461 W. Jefferson, Detroit 9, Mich.

▲ For more details circle NED-750 D on enclosed inquiry slip ▲

ELECTRONIC PRINTING TUBES
print on nonsensitized material



Facsimile, oscillographic, address labeling, and television type image reproduction equipment are applications for Printapix cathode ray tubes for direct electronic printing. Capable of operating at high speed on nonsensitized dielectric material, the two tubes with 2¾-in. wide printing head utilize ordinary paper for image rendition. Printing quality can be improved by making the opposite side of the paper slightly conductive. Transparent media such as glass and thin transparent plastic or sheet polyesters may also be used. Image development is an inexpensive, instantaneous, dry process. Tubes with printing heads up to 12 in. wide can be produced to order. • **Litton Industries**, Electron Tube Div., 960 Industrial Rd., San Carlos, Calif.

▲ For more details circle NED-751 D on enclosed inquiry slip ▲

NEW!
Counter Bulletins

New Quick Reset, Geared Counters . . . Operation, uses and modifications described, including special predetermining feature for automatic control of conveyor lines, machines and material movement.

Predetermining Counters . . . Complete information on use and application on this new automatic production control method. Includes data on new Electric and Electronic Predetermining counters which feature automatic reset and high counting speeds.

Send for your copies, today!

Veeder-Root
HARTFORD 2, CONNECTICUT
"The Name that Counts"®

VR 0-13

▲ For more details circle NED-752 D on enclosed inquiry slip ▲

NEW . . . IMPROVED . . . model 15A

the **STRIPPIT FABRICATOR**

for high-profit, low-cost punching, notching and nibbling . . . for prototype, short and medium production runs

FEATURING the new *Strippit Electro-Hydramatic Head* — simplified design . . . minimum number of parts . . . needs no pressurized air. Makes the 15A easier to install, simpler to maintain, more economical to operate.

punches any round or shaped hole up to 3½" diameter in sheet material — up to ¼" mild steel.

notches 90° corners — rectangular, radii, vee and special shape edge notches — up to ⅛" capacity in mild steel.

nibbles straight line or contour shearing up to 38" diameter circle, at 165 strokes per minute, ⅛" mild steel.

accurate, quick-set gauging a unique, multiple-stop system for exact work positioning to any layout specifications — *in seconds.*

quick-change punches and dies from one size to another in less than 20 seconds — within easy reach in labeled, built-in file drawers.

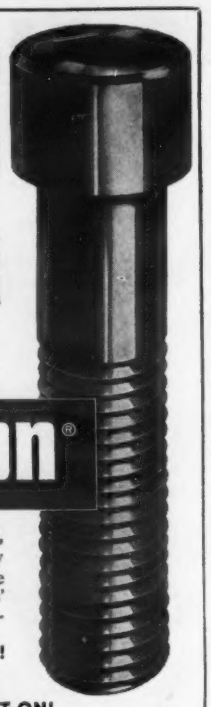
easy conversion to a high speed production punching unit with the Strippit Duplicator and the Dupl-O-Scope or Microbars to punch Duplicator templates.

WRITE TODAY for new Catalog 15A and demonstration at your own plant of the capabilities of this high-profit fabrication system.

WALES **STRIPPIT** INC.
227 Buell Road, Akron, New York
In Canada: Strippit Tool & Machine Company, Brampton, Ontario
A UNIT OF HOUDAILLE INDUSTRIES, INC.

▲ For more details circle NED-753 D on enclosed inquiry slip ▲

QUANTITY QUALITY QUICK



. . . yours with
SOCKET SCREW PRODUCTS by

B-RIGHT-ON®

To get exactly *what* you want, *when* you want it, specify B-RIGHT-ON! Immediate service from selected mill supply houses' stocks. Write for detailed design-dimensional brochure!
COMPLETE SOCKET SCREW LINE!

® You can do better with B-RIGHT-ON!

THE BRIGHTON SCREW & MFG. CO.
1957 Reading Road, Cincinnati 2, Ohio

For more details circle NED-754 D on enclosed inquiry slip

FREE!

If heat processing is your job— don't miss this "idea-packed" booklet

Never before have so many sound basic ideas on heat processing been available under one cover.

Written by engineering experts at Michigan Oven Company, it offers practical suggestions on what to look for in an oven regardless of your application.

Why not send for "The Handbook of Oven Facts"? It may be the most important decision you make today! Or, if you have a specific application, a MOCO representative will be pleased to call.

MICHIGAN OVEN COMPANY
419 Brainard, Detroit 1, Michigan

For more details circle NED-755 D on enclosed inquiry slip

MODEL 651

- Very small strapping surface required.
- Adjustable tension control.
- Strap easily inserted into stretcher.
- Continuous take-up of slack.

New pneumatic strapping tools . . . increase output by 50%

Here's the ultimate in pneumatic stretchers. Timed in field tests these tools were able to cut strapping time up to 50%. Amongst their many features, the new tools offer adjustable controlled tension . . . are able to take various sizes of strapping . . . will operate well on a small surface. Full details and specifications available on request. Circle reader service card or write:

A.J. GERRARD & COMPANY / STRAPPING MATERIALS
410 East Touhy Avenue • DES PLAINES, ILLINOIS

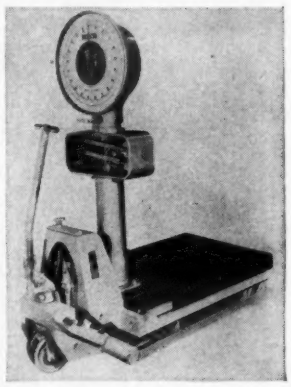
For more details circle NED-756 D on enclosed inquiry slip

MINIATURE HEAT SENSORS
are sealed, potted resistance type

Completely sealed and potted resistance temperature sensors, measuring only 1/4 x 1/8 in., are encased in metal tube for protection from rigorous environmental conditions. They change resistance at a rate of 0.393 per cent for each 1° F change in temperature. Tolerance over a wide temperature range is 0.1 per cent. Sensor is calibrated at a number of resistance check points ranging from 100 to 400° F. Two leads conduct signals to indicator equipment. • Dale Products, Inc., Columbus, Nebr.

For more details circle NED-757 D on enclosed inquiry slip

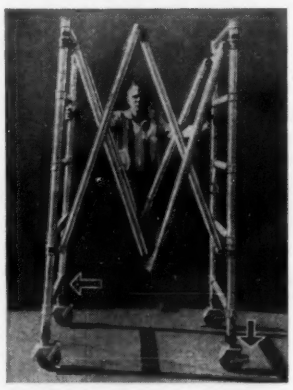
PORTABLE SCALE TRUCK
moves, weighs loads simultaneously



Savings in time and handling are effected with this portable scale truck which moves loads and weighs them simultaneously. The 3000-lb capacity hydraulic footlift hand truck is adapted to suit the design and capacity of the scale to be used. Type B brake on truck applies pressure to front wheels, allowing use on grades. • Lewis Shepard Products, Inc., Dept. R10-3, 125 Walnut St., Watertown 72, Mass.

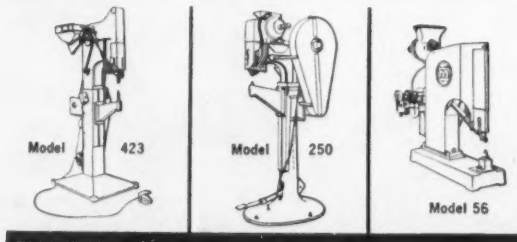
For more details circle NED-758 D on enclosed inquiry slip

ALUMINUM SCAFFOLD
one-piece type unfolds in seconds



Two folding V-braces snap together and lock automatically in a rigid X-brace joint to support the V-X one-piece aluminum scaffold. It unfolds in a few seconds for erection by one man. Only 29 in. wide and 10 ft long, it rolls through doorways and down narrow aisles. Collapsed thickness is 9½ in. Platform height is adjustable from 1 to 8½ ft. Casters lock automatically and legs are adjustable for uneven floors and stairways. Photo shows scaffold partly open. • Up-Right Scaffolds, 1013 Pardee St., Berkeley, Calif.

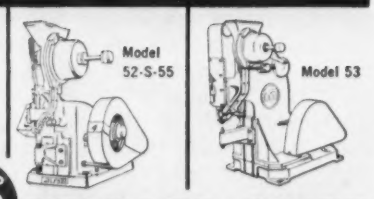
For more details circle NED-759 D on enclosed inquiry slip



MILFORD'S FLEXIBLE RIVETER LINE CAN HELP CUT YOUR ASSEMBLY COSTS

Milford adapts to your production line with a wide range of automatic riveters designed to cut assembly costs. Count on Milford's versatility to come up with answers you need at cost savings over other fastening methods.

Write for more information.



THE MILFORD RIVET & MACHINE CO.
MILFORD, CONN. • HATBORO, PENN. • ELYRIA, OHIO • AURORA, ILL. • NORWALK, CALIF.

For more details circle NED-760 D on enclosed inquiry slip

When New Molds Stick use IMS SILICONE FLUID

For Better Tool and Die Lubrication!

Shorten costly break-in periods! Simply spray on this perfect parting agent from self-dispensing aerosol! Useful too in PATTERN MAKING — releases patterns from master molds with minimum surface defects. Remember . . .

WHERE ANYTHING STICKS it always pays to try IMS SILICONE SPRAY

Get new tools into production sooner. Keep a few cans handy all the time. Order today!

DELIVERED PRICES
Single Can $2.00
Unbroken Dozen . . . $18.00
Unbroken Gross . . . $197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE ROAD WYoming 1-1424 CLEVELAND 20, OHIO

For more details circle NED-761 D on enclosed inquiry slip

LIFTS BY VACUUM

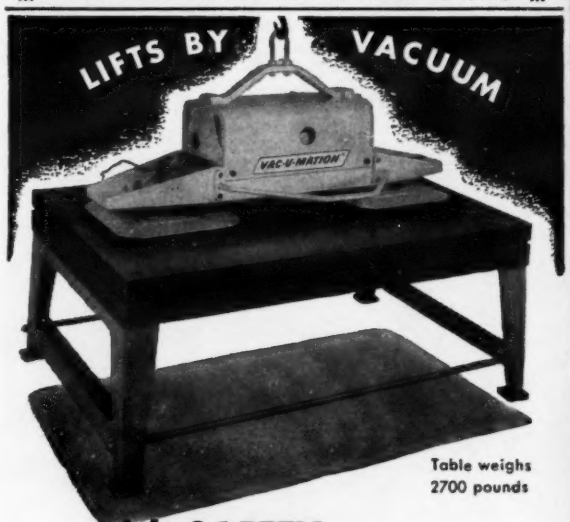


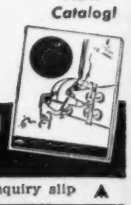
Table weighs 2700 pounds

with SAFETY and ECONOMY

VAC-U-MATION SHEET LIFTERS shorten man-hours, cut handling costs, pay for themselves F-A-S-T. Models available from manually-operated units to completely automatic models with capacities for handling up to 2,000 lbs.

4582

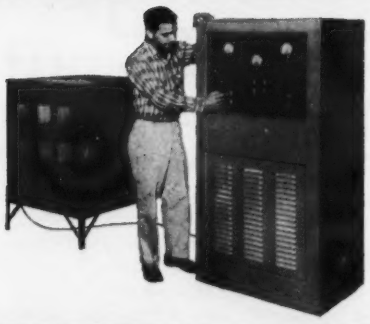
Write for NEW Catalog!



VAC-U-MATION DIVISION
4169 Ravenswood Avenue, Chicago 13, Ill.
District Offices: Detroit and Cleveland

For more details circle NED-762 D on enclosed inquiry slip

CLEANING PROBLEM?
SONOCEN® Ultrasonic Cleaners by BRANSON may be your answer!



Experienced counsel in planning, installation, and maintenance of ultrasonic cleaning systems. Wide range of standard, use-proven units combine into efficient cleaning systems with any needed features and capacity from benchtop size to the largest engineered batch or conveyorized installation. Assured nationwide service by factory-trained specialists. Tell us your problem.

BRANSON ULTRASONIC CORPORATION
56 Brown House Road • Stamford • Connecticut

For more details circle NED-763 D on enclosed inquiry slip

TEST CUSTOMIZED Master Power AIR HOIST ON 10-DAY FREE TRIAL

with absolutely no obligation

Designed for 128 basic variations. Overloads will not damage motor. Can be used anywhere. Positive control at all speeds with safe emergency lowering. Explosion-proof model available. Choose from a complete line of assembly, abrasive and percussion air tools. Write today for 10-day hoist test.

Master Power CORPORATION • Bedford, Ohio
A Black & Decker subsidiary

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FREE! ULTRASONIC CLEANING BULLETIN

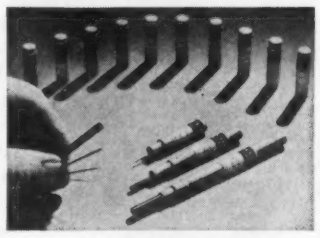
Describes National Ultrasonic Corporation's:

- Applications Laboratory service. Your sample parts are cleaned ultrasonically and equipment and cost recommendations are made at no charge.
- STANDARDLINE medium power cleaners for all applications requiring average energy levels.
- HEAVYDUTYLINE high power cleaners for industrial applications requiring high energy density.
- NUclean solvents and detergents especially formulated for ultrasonic cleaning.

NATIONAL ULTRASONIC CORP.
111 Montgomery Ave., Irvington 11, N. J.
ESsex 1-0550 • TWX NK 1030

▲ For more details circle NED-765 D on enclosed inquiry slip ▲

CARBIDE DRILL BLANKS in wire sizes from No. 1 to 80



Precision ground from solid Grade C-2 carbide, Series 1825 drill blanks are available from stock in No. 1 to 80 wire sizes. Diameters range from 0.0135 to 0.2230 in. with tolerance of 0.0000 to −0.0005 in. Special blanks and grades can be supplied. • **Atrax Co.**, 240 Day St., Newington 11, Conn.

▲ For more details circle NED-767 D on enclosed inquiry slip ▲

TOOL CHESTS have weather-tight covers

Four-tray Model 7817 mechanics' tool chest has twin-grip handles which eliminate spilling, heavy gage formed steel trays, continuous hinges, turned edges, heavy duty draw bolts, and rust preventive undercoating. An infrared-baked silver finish is standard. Steeple-top Model 3119 chest is electrically welded and has embossed panels for strength. It has a one-piece weather-tight cover, reinforced ends, turned edges, seamless tray with socket compartment, deep tote tray, and green infrared baked enamel finish. • **Union Steel Chest Corp.**, LeRoy, N. Y.

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SEQUENCE TIMING BOARD actuates three stopwatches at once

Sequential steps are timed without time loss between them with the Multi-Sequence board. It actuates three stopwatches simultaneously. Timing starts with watch No. 1 at zero; No. 2 stopped at and ready to fly back from any point other than zero; and No. 3 in motion. Thus each step under observation is timed in with the same motion that the preceding step is timed out. User has the entire duration of any step to record data from the previous step. Board of 3/16-in. thick black Plexiglas holds three stopwatches of various types and makes in spring-loaded cradles and a common alignment plate. Left-handed model is available. Price is $18.75. • **Heuer Timer Corp.**, 441 Lexington Ave., New York 17, N. Y.

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How to select the correct VARIABLE SPEED DRIVE

Get your FREE copy now!

Complete description and engineering data on the Cleveland Speed Variator.

This unique variable speed drive gives you infinitely variable, stepless speeds up to 9:1 (from ⅓ to 3 times input speed). Precise adjustment gives instant, smooth speed change by manual, automatic or remote control.

Simple construction, compact, quiet running. No belts or complicated linkage.

Thousands already in use. Write for Bulletin K-200.

CLEVELAND WORM & GEAR DIVISION
Eaton Manufacturing Company
3283 East 80th Street • Cleveland 4, Ohio

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These Features Put the "SAFE" in PROTECTOSEAL SAFETY CANS

1 DOUBLE WALL FLAME ARRESTER
Provides a durable double barrier against flame entering can. If inner wall is damaged, outer wall provides protection until the unit is replaced.

2 Rugged, Mechanically Joined Spout with Vapor Sealed Flame Arrester.
Machine-threaded flame arrester and tightly secured spout connection is vapor-tight to prevent flame from by-passing the arrester.

3 Quick Acting Dispensing Valve with Shock Guard Carrying Handle
Convenient hand operation provides fast, positive control while pouring. Instantly closes when hand pressure is released. Handle design prevents accidental opening of dispensing lever while carrying or when can is bumped or dropped.

4 Leak-Resistant Gasket and Tight Spout Seal
Special gasket mounted in spout cap withstands deteriorating effects of most petroleum solvents. Spring operated cap of Spout Seal has ball and Socket joint to assure uniform, self-adjusting liquid-tight seal.

5 Automatic Pressure Relief
Spring mounted spout cap opens automatically to relieve excessive internal vapor pressures. On release of vapors, spring tension closes cap.

Storing and dispensing flammable liquids with Protectoseal Safety Cans is your best insurance against the risk of accident or hazard. Protectoseal Safety Storage and Supply Cans incorporate every known feature—many of them exclusive—to assure safe, efficient control of flammable liquids and vapors.

The difference between a Protectoseal Safety Can and any other safety can is in these features—many of them not apparent from casual inspection.

When you are specifying or buying safety cans, it will pay you to check the "hidden values" you get in Protectoseal Products, because these are the values that make Protectoseal Safety Cans the safer, better buy every time.

Write for new Protectoseal Catalog.

THE PROTECTOSEAL COMPANY
1964 SOUTH WESTERN AVE. • CHICAGO 8, ILLINOIS

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NEW 2-SPEED SKIL RECIPRO SAW

cuts anything that can be sawed by hand ...easier, better, and 5 to 20 times faster!

New 2-speed feature obsoletes all other reciprocating saws. High-speed for fastest cuts in wood, compositions; low-speed for fast metal cuts with minimum blade wear. The right cutting speed for every job—no single compromise speed.

Plus these features:

- **Exclusive two-position shoe**—Doubles blade life. When one blade section wears out, another part can be used.
- **Off-center blade location**—Cuts close to corners, right or left, up or down, because blade has off-center location and can be reversed in blade clamp.
- **Only 3 main moving parts**—Simple, rugged design. All ball-bearings. Parts subject to wear are heat-treated steel.

WRITE TODAY!

SKIL Corporation, Dept. NBT-40
5033 N. Elston Ave., Chicago 30, Ill.

Send me FREE brochure (No. F-14499) containing full details of the new SKIL Recipro Saw and illustrating the many ways it can be used.

Name _____
Company _____
Position _____
Street _____
City _____ *State* _____

SKIL

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PAINT STRIPPING CLINIC!

Send Us Your Tough Stripping Problems for Fast Action!

10 YEARS OF BECK PAINT STRIPPING CLINICAL SERVICE Saves Thousands of $$$ for Customers—Who Now Use World-Famous...

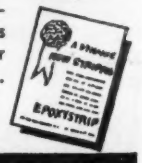
EPOXYSTRIP

Better find out for yourself . . . about Epoxystrip, Econostrip and other Beck Paint Remover lines and formulations. Use the BECK CLINIC SERVICE — send us several parts, sections, or test panels (properly tagged) of the work to be stripped.

Write or 'phone giving us essential information—your problem details, requirements, tanks available, hot or cold, etc. This service, and our prompt report, are free, with no obligation.

Beck Strippers outstrip all others — removing organic finishes, epoxies, etc., as easily as baked enamels, lacquers, etc. No stripping scum — clean rinsing!

SEND FOR FREE BROCHURE



BECK EQUIPMENT COMPANY
3350 WEST 137th STREET — CLEVELAND 11, OHIO

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NEW GAGES NEW IDEAS

IN THE 1960

Dwyer

INSTRUMENT MANUAL

Need a meter for *direct* reading of both air velocity and static pressure? An inexpensive gage that tells homeowners when to change air filters? A complete, accurate combustion test kit, or a manometer that *rolls* up to fit compactly in your tool box? You'll find these and many more money-saving ideas described in this free Dwyer manual. It's packed full of valuable information about Dwyer's complete line of instruments.

- Magnehelic Gages . . . velocity, resistance, draft, static and gas pressure.
- Inclined Tube Gages . . . draft, velocity, slight pressure variations.
- Air Filter Gages . . . models for every installation.
- Hook Gages . . . a true low pressure calibration standard.
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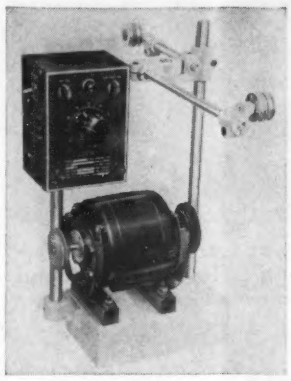
- Flowmeters . . flow measurement of gas
- Wind Speed Indicators
- Slack-Tube Manometers . . . roll-up types.
- Flex-Tube Manometers . . . U-tube, well types.
- Inclined-Vertical Manometers
- Combustion Test Kit . . . for CO_2 content, draft, temperature, smoke.
- Pitot Tubes . . . inch-graduated, stainless steel.
- Pressure-Actuated Switches
- Special Instruments, Designs

Send for your free copy today

F. W. DWYER MFG. CO.
P. O. BOX 373-Q • MICHIGAN CITY, INDIANA

▲ For more details circle NED-773 D on enclosed inquiry slip ▲

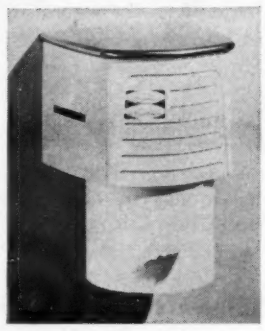
VARIABLE MOTOR DRIVE provides 0-4000 rpm for small lathes



Continuously variable spindle speed from 0 to 4000 rpm is provided by this motor drive unit for jewelers' or miniature lathes. Unit operates on 110 v single-phase ac and has full overload protection. The 1/8-hp double-end motor is mounted on a base with an adjustment for belt tension. Dynamic braking is an inherent feature. A reversing switch and a separate switch for coolant pump control are mounted on control unit. Adjustable swiveling idler for driving accessories is included on Model ACAZ or optional on Model ACAY. • **Louis Levin & Son, Inc.**, 3610 S. Broadway, Los Angeles 7, Calif.

▲ For more details circle NED-774 D on enclosed inquiry slip ▲

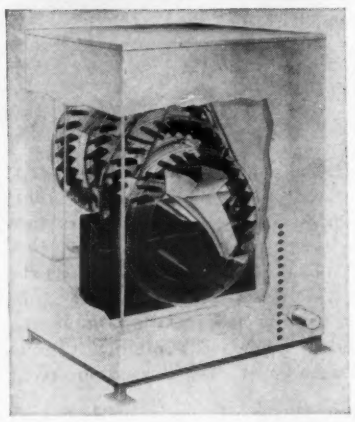
TISSUE DISPENSER holds two-roll supply



When the first roll of toilet tissue held in the Tissue-Master dispenser is finished, the user tears off the empty core and a second roll automatically drops into place, ready for use. Dispenser holds a 3 to 7-day supply and is made of durable white plastic with a burnproof chrome top. It accommodates varying quantities of several types of tissue. • **Steiner Co.**, 740 Rush St., Chicago 11, Ill.

▲ For more details circle NED-775 D on enclosed inquiry slip ▲

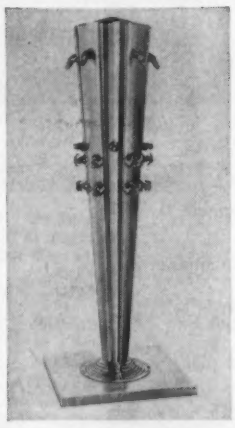
ULTRASONIC CLEANER processes metal parts rapidly



Four rotating wheels with evenly spaced cubicles hold machined and sheet metal parts in the AutoSonex ultrasonic cleaning and degreasing machine. As parts move automatically through the series of wheels, they are immersed in a degreasing solution for ultrasonic cleaning, rinsed, drained, and passed through an isolated solvent drying chamber. Various solvents, water solutions, and acids can be used for cleaning and degreasing. Offered with vibratory hopper feed, it processes metal parts of all shapes, including those with blind holes and liquid traps. Self-contained standard medium size machine requires a 28 x 42-in. floor area and only electric, water, and drain connections. • **Metalclean Equipment Co.**, Box 177, Bala Cynwyd, Pa.

▲ For more details circle NED-776 D on enclosed inquiry slip ▲

MULTIPLE SHOWERS free-standing, one to six-head type



Stainless steel housing of the Space'anea type Showergon multiple shower unit contains concealed piping, choice of hot and cold water compression valves, tempered water valve or no valve, and optional lather type soap dispenser. Unit has one to six stations or, if wall-mounted, one to three shower stations. Exposed brass fixtures are copper flash, nickel, and hard chrome plated. Models are available for floor, rear, or overhead piping. Drain is around base, simplifying installation. • **Logan Mfg. Co.**, Box 111, Glendale, Calif.

▲ For more details circle NED-777 D on enclosed inquiry slip ▲

Complete, year-round grounds maintenance costs can be cut to the very bone with Gravely!

The precise control, amazing ease of operation and riding comfort of the Steering Sulky with 75"-cut Gang Mowers make large-area mowing quick and easy. Now, a new multi-purpose Power Spreader also available.

Gravely offers 30 performance-proved Tools to do every maintenance job—Faster! Better! Easier! All-gear Drive, Power Reverse, Precision Steering, Push-Button Starter.

GRAVELY offers FREE "How to Cut Costs of Grounds Maintenance" Booklet. And a FREE Demonstration. Write Today!

GRAVELY TRACTORS, INC.
P.O. BOX 668-D DUNBAR, W. VA.

PERFORMANCE-PROVED SINCE 1922

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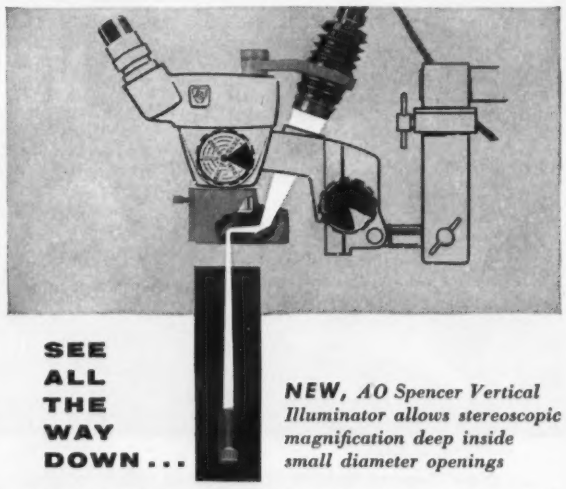
Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES

Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

▲ For more details circle NED-779 D on enclosed inquiry slip ▲



SEE ALL THE WAY DOWN . . .

***NEW,** AO Spencer Vertical Illuminator allows stereoscopic magnification deep inside small diameter openings*

The new Vertical Illuminator and the AO Spencer Cycloptic Stereoscopic Microscope make a unique team that can be the answer to your problem whether it's the inspection of detail in small diameter, deep hole borings, or delicate assembly of miniaturized parts where every move is critical.

This low-cost illuminator readily attaches to the Cycloptic to provide efficient, shadowless illumination deep inside small orifices . . . and the Cycloptic delivers realistic, erect, true three-dimensional magnification of the illuminated detail.

The remarkable long working distance afforded by Cycloptic (up to 7 inches when Illuminator is used with 53 and 59 Series) gives you *plus* advantages . . . permits ample room for large objects or inspection and assembly tools.

Add this unit to your present Cycloptic or ask about low-cost Vertical Illuminator and Cycloptic stereoscopic microscope combinations.

American Optical Company
SPENCER Instrument Division • Buffalo 15, New York

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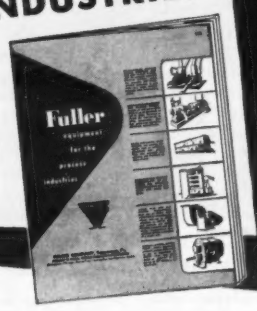
FREE BULLETIN

FULLER EQUIPMENT FOR THE PROCESS INDUSTRIES

12 pages of Photos Diagrams Charts



. . . tell you and show you how to move mountains of dry pulverized, crushed and granular materials to and from, up, over, around and under your plant to storage . . . and from storage to processing points . . . and do it economically.

It's called Fuller Equipment for the Process Industries. Just write for Bulletin G-3 . . . today. 1358 G211

FULLER COMPANY
154 Bridge Street
Catasauqua, Pa.

Fuller

SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION

▲ For more details circle NED-781 D on enclosed inquiry slip ▲

LEASE... RENT... or BUY

Your Material Handling Equipment

Towmotor Corporation and its subsidiary Gerlinger Carrier Company offer you three simple ways to improve your material handling operations . . . realize immediate savings . . . and accomplish this with little cash outlay.

1. You can put Towmotor-Gerlinger material handling equipment — fork lift trucks and material carriers — to work on a continuous round-the-clock basis through the Lease-A-Truck Plan. No down payment—no working capital tied up—just a small monthly charge.
2. You may also *rent* Towmotor-Gerlinger equipment on a short-term basis — as peak or seasonal demands require. You will start lowering handling costs immediately.
3. You can own new Towmotor-Gerlinger equipment by making reasonable monthly payments through our Time Payment Plan. Low interest rates make it easy.

Complete factory supervised maintenance can be included in any of the above plans.

You'll find Towmotor-Gerlinger handling economies consistently pay the small monthly cost many times over. For complete information on any of these profitable, money saving plans, write or contact Towmotor-Gerlinger Rental Division, Towmotor Corporation, Cleveland, Ohio.

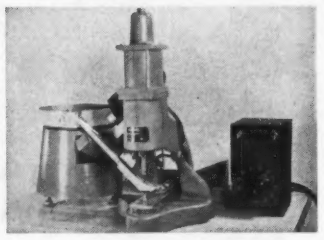
TOWMOTOR THE ONE MAN GANG ® -GERLINGER

FORK LIFT TRUCKS, CARRIERS AND TRACTORS SINCE 1919

Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation

▲ For more details circle NED-782 D on enclosed inquiry slip ▲

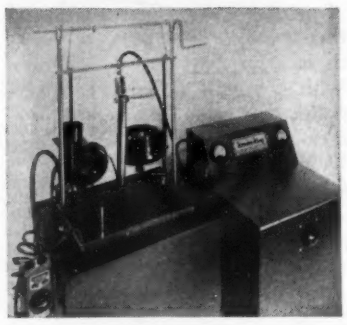
TERMINAL SETTER
orients, feeds, sets 100 per minute



Split lug, feed-through, and single-end terminals can be handled by the Model FST-1 Electroset terminal setter. It consists of an Electropunch and vibratory feeder, plus the necessary orienting devices, track, electrical controls, and power feed for orienting, feeding, and setting up to 100 terminals per minute. A variable transformer regulates impact from a gentle tap to 3500 lb. Stroke length is 1⅝ in. and throat depth is 4½ in. A beam of light from under the punch head aids in finding the exact location of the terminal when hidden by the terminal board. • **Black & Webster, Inc.**, 570 Pleasant St., Watertown 72, Mass.

▲ For more details circle NED-783 D on enclosed inquiry slip ▲

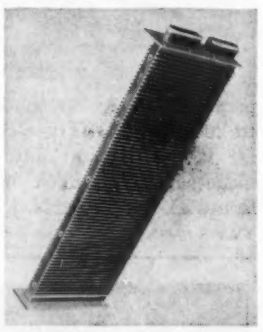
CHROME ELECTROPLATERS
salvage worn tools, gages, parts



Any depth of chrome plating can be applied to gages, tools, and worn or mismachined parts and held to extreme accuracy by three Krome - King toolroom electroplaters. Salvage thicknesses of 0.060 to 0.070 in. OD have been applied. Units feature a hoist attachment which raises and lowers plastic coated table into the No. 202 self-regulating chrome solution. Table not only holds parts, but deflects the current to prevent build-up on ends and edges of parts. Models K-50, K-100, and K-250, with outputs of 50, 100, and 250 amp, 6-v dc, have respective solution tank capacities of 6, 12, and 24 gal. Tank of illustrated Model K-100 measures 18 x 15 x 12 in. inside. • **National File Co.**, Krome-King Div., 530 N. Cedar St., Lansing 12, Mich.

▲ For more details circle NED-784 D on enclosed inquiry slip ▲

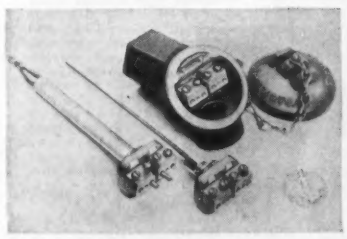
HEAT EXCHANGERS
are lightweight, cold-plate units



Line of mass produced cold-plate heat exchangers for various industrial, electronic, and airborne applications have high thermal efficiencies and are light in weight. Illustrated unit has corrugated aluminum strips brazed to the face plates to provide conductive media for the flow of liquid or gaseous coolants. Maximum air pressure drop is 3.46 in. of water at a rated air flow of 2 lb per minute at 160° F. Minimum heat removal capacity of the 3-lb 6-oz unit is 8.5 Btu per minute. • **Horkey-Moore Associates**, 24660 Crenshaw Blvd., Torrance, Calif.

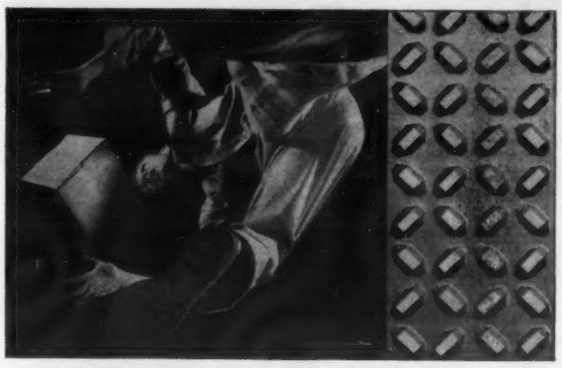
▲ For more details circle NED-785 D on enclosed inquiry slip ▲

THERMOCOUPLE CONNECTION-HEAD
for hot, corrosive atmosphere use



Compact, weatherproof Mini - Head thermocouple connection-head, utilizing stainless steel chain and nonremovable screws, is designed for high ambient temperature and corrosive-atmosphere applications. Head contains a high-heat refractory terminal block that will fit B&S No. 7 gage or smaller T/C wires and B&S No. 12 or smaller extension wires. It accommodates both conventional thermocouple wire elements and the new metal-sheathed CeramiKouples in 1/16, ⅛, 3/16, and ¼-in. sizes. Pressure tight to 125 psi, the MH Series has ¾ in. conduit outlet and choice of ¼ to 1 in. NPT protecting tube outlet sizes. • **E. C. Smith Mfg. Co.**, Forrest & Hector Streets, Conshohocken, Pa.

▲ For more details circle NED-786 D on enclosed inquiry slip ▲



One slip can cost more than USS Multigrip

Your workers stand—and often fall—in slippery places. Falls account for about 1 in every 5 industrial injuries.

You can eliminate many slips and falls by installing USS Multigrip Floor Plate around machines, on loading platforms, stair treads and main shop aisles.

Multigrip means safe footing wherever it's used. Hundreds of little cleats give safe traction in any direction. Water drains off quickly. Oil and grease can be easily removed with the usual cleaning compounds.

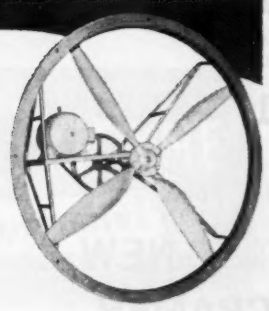
Saves money, too! Where floors take a heavy pounding from traffic, Multigrip will stand up for years under constant use. It won't splinter or crack and can be installed in extra wide plates. There's little or no maintenance.

For more information about USS Multigrip Floor Plate, write United States Steel, 525 William Penn Place, Pittsburgh 30, Pa. *USS is a registered trademark*

Sold by leading distributors from coast to coast.

USS United States Steel

Why Buy 3 Fans When 1 Will Do the Job?



When you've got a big job to do, use a big fan to do it. Hartzell Low-Speed, High-Volume Fans can handle your big air-moving jobs with amazing economy because one of these big fans will do the work of several smaller units.

For example, one 94" Hartzell Low-Speed, High-Volume fan will move 174,000 CFM at free air (or 157,000 against ¼" static pressure). And if that's not enough, Hartzell can supply other models up to 22' in diameter.

And these heavy-duty Hartzell fans are practically maintenance free because they're specifically designed for demanding industrial applications.

For complete details, call your nearby Hartzell field office or write for Bulletin A-109.

HARTZELL PROPELLER FAN CO.
Div. of Castle Hills Corp.
62 Thomas Blvd., Piqua, Ohio A member of AMCA

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CLOSURES

- **Metal or Plastic Caps or Plugs to protect threads, tubes, machined parts, reamers, cutters, tools.**
- **Protect against thread damage, dust, dirt, and moisture.**
- **For inside and outside application. All sizes. Immediate delivery.**

Clover closures are made in metal and tough plastic polyethylene. They are made in caps, plugs and special shapes to fit parts tightly, offering completely sealed protection during manufacture, shipping and storage. Backed by years of closure experience. Write for low prices and complete information.

Send coupon today!

Gentlemen: Please send samples and prices of closures in Polyethylene ☐ Aluminum ☐

Name .....
Address .....
City .....

CLOVER INDUSTRIES, INC. 601 Young Street Tonawanda, N. Y.

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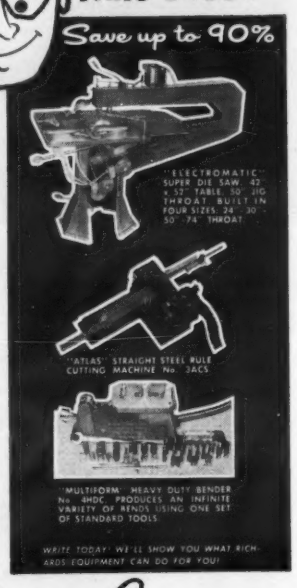
Better Steel Think about Rule Dies!



FOR SHEARING, BLANKING, PUNCHING, PIERCING

YOU CAN MAKE STEEL RULE DIES FASTER, BETTER, CHEAPER WITH RICHARDS STEEL RULE DIE-MAKING EQUIPMENT!

Build steel rule dies in your own plant! Production cost and waiting time go down when Richards Equipment goes to work for you! More and more progressive manufacturers are turning to steel rule dies for faster, higher-profit work on all types and gauges of metal.

Richards' fifty years of experience as pioneer manufacturers of steel rule die-making equipment and supplies provides you with a complete service.

J.A. Richards Company

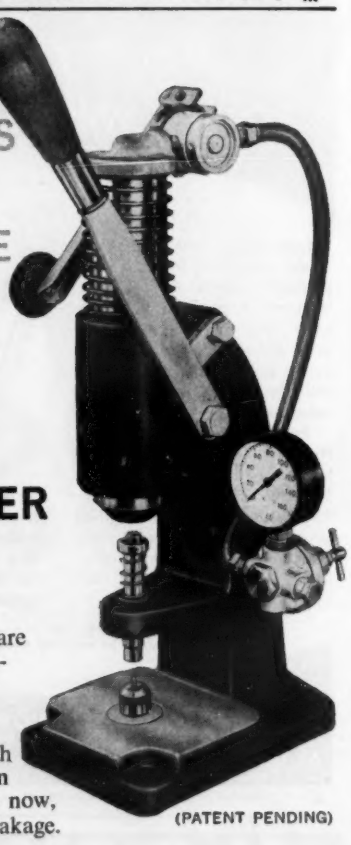
NORTH PITCHER STREET • KALAMAZOO, MICHIGAN

For more details circle NED-790 D on enclosed inquiry slip

NOW 2 BIG JOBS ON 1 MACHINE

. . . without tool change

THE NEW CRAMER PRESSTAKER



Press-fitting and final staking of assemblies are *both* done by this radically new production tool . . . at rates impossible with separate machines, with much greater precision than obtainable up to now, and without parts breakage.

(PATENT PENDING)

- Sub-assembly inventories can be reduced or entirely eliminated, because of far faster production from primary components.
- Standard tooling, completely interchangeable, meets the needs of an enormous range of jobs.
- Set-up time for combined operations is less than 20 seconds, and the operator herself can easily do it.
- Brittle phenolics do not break in staking, because the staking blow is exactly controlled and the stake is properly shaped.
- Accuracy of both hold-down and staking punch is held within 1/1000, by precision machining and unitized construction.
- Staking blow is pure impact . . . air powered, uniform, and without recoil.
- Operator safety is complete: one hand is on the hold-down lever, the other on the staker release.
- Deep-throat model takes printed circuit boards 20 inches wide.

WRITE TODAY FOR BULLETIN TELLING HOW IT'S DONE

Find out how *you* can do jobs you never thought possible . . . swap assembly problems for profits . . . and give your production line a new boost in output and morale.

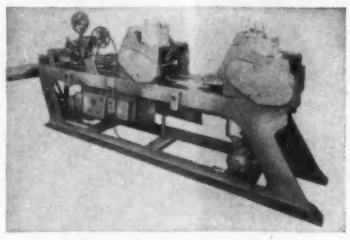
MACHINE TOOL DIVISION

CRAMER CONTROLS CORPORATION

CENTERBROOK, CONNECTICUT

For more details circle NED-791 D on enclosed inquiry slip

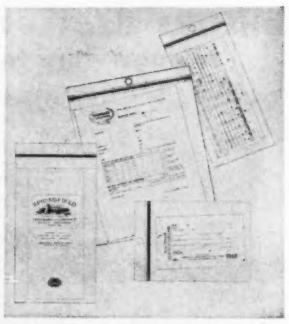
LABELING MACHINE affixes 30,000 labels per hour



Either electronic and standard labeling tapes or both are handled by the Model RS-65 labeling machine. It affixes 30,000 mailing labels per hour on magazines in perfect alignment. The 12 x 3 x 4-ft machine takes magazines from 5 x 7 in. up to 12 x 18 in., and up to 5/16-in. thick. Automatic town sorting and diverting of single copies is available. • **T. W. & C. B. Sheridan Co.,** 220 Church St., New York 13, N. Y.

For more details circle NED-792 D on enclosed inquiry slip

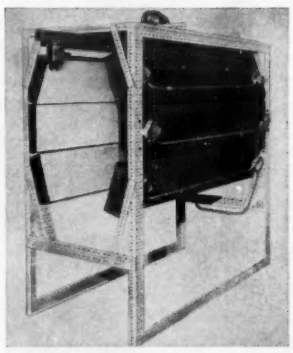
PLASTIC DOCUMENT HOLDERS have air and weather-tight closures



Transparent polyethylene Poly-Zip holders for sheets, cards, documents, and valuable papers feature an air-tight, weather-resistant closure which is simply pressed shut with the fingers. Seal is easily pulled open. Punched extension at the top of each holder facilitates hanging and storage. Four sizes hold 11 x 8½, 5 x 10, 4 x 9, and 5 x 7-in. documents and range in price from 15 to 30 cents. • **Chicago Desk Pad Co.,** 4640 N. Oketo, Chicago 31, Ill.

For more details circle NED-793 D on enclosed inquiry slip

MODULAR DRYING OVEN infrared type gives uniform heat



Self-contained RediRay heater which uses a ceramic face as a source of infrared radiation is built into these modular heating ovens. They can be made to fit any drying system and give uniform heat over the entire emitting area. Use with conveyors is also possible. Unit shown gives up to 500 w/sq ft of radiation. Work temperatures range up to 400° F. Other units range up to 2000 w/sq ft. The 6-ft oven shown is a basic modular length. Almost any length and module arrangement can be supplied. • **Infra Red Systems, Inc.,** 240 Route 23, Riverdale, N. J.

For more details circle NED-794 D on enclosed inquiry slip

Kling MILL-ALL

for high speed facing of structural steel shapes, plates, forging and castings!

- *All structural shops can afford this extra powerful, high speed machine . . . Available in numerous sizes.*
- Has exceptional accuracy . . . Gives high quality finish.

- All welded steel construction
- Ball screw feeds
- More power
- Cutter mounted on motor shaft
- Simple to operate

WRITE for full information and Bulletin MA-1

KLING BROS. ENGINEERING WORKS

1320 N. KOSTNER AVENUE • CHICAGO 51, ILLINOIS

Export Distributor: Simmons Machine Tool Corp., 50 E. 42nd St., New York 17

Exclusive Canadian Distributor: Rudel Machinery Company, Limited

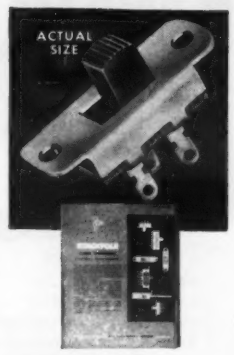
For more details circle NED-795 D on enclosed inquiry slip

6 AMP.

U. L. RATED

Slide Switch

Truly inexpensive . . . only 1⅜"l by 17/32"w . . . new Stackpole Type SS-36-1 handles a full 6-amps at 125 volts ac. Use it on appliances, power tools, instruments — wherever a heavy-duty SPDT or SPST switch is called for. 9 attractive trigger knob colors to match your styling needs.



The Most Complete Line

Dependable, low-cost Stackpole Slide Switches are made in over 15 basic types—0.5-6 amp ratings, 1-4 positions, 1-3 poles, maintained or momentary contact, pushbutton-operated, etc. Printed wiring terminals, shields, colored triggers optional.

NEW! SLIDE SWITCH BULLETIN contains details on the complete Stackpole line. Write today!

STACKPOLE

Electronic Components Division STACKPOLE CARBON COMPANY, *St. Marys, Pa.*

For more details circle NED-796 D on enclosed inquiry slip

WRITE NOW FOR THIS

FREE CATALOG

ON WORK HOLDING TOOLS FOR PRODUCTION, TOOLING, MAINTENANCE

Drill press vises, angle vises, swivel machine vises, rotary tables, lathe milling attachments, production vises, heavy duty angle vises, and adjustable angle plates are illustrated and fully described in the New Palmgren Catalog. This is the only complete line of work holding devices available anywhere. Designed for production, tooling, and maintenance work, there are 68 different models and types to choose from. Vise jaw sizes are from 1½" to 8". Ask for your copy of this FREE Catalog No. 205 today. The complete line with details and prices are shown.

PALMGREN PRODUCTS

by CHICAGO TOOL AND ENGINEERING CO.

8378 SOUTH CHICAGO AVE. • CHICAGO 17, ILL.

For more details circle NED-797 D on enclosed inquiry slip

For more details circle NED-798 D on enclosed inquiry slip

WEAR RESISTANT THOMSON

AVOID the HIGH COST and difficulty of fabricating long, hard & straight parts by conventional methods...

60 Case

hardened and ground

SHAFTS, ROLLS, GUIDE RODS and other long-round parts ELIMINATE WEAR and REDUCE COST

ADVANTAGES of 60 Case
- COST REDUCTION
- HARD BEARING SURFACE
- NICK- & DENT-PROOF
- ACCURATE DIAMETERS
- GROUND FINISH
- STRAIGHT PARTS
- DELIVERY FROM STOCK
- ADDED STRENGTH
- UNIFORM HIGH QUALITY

60 Case material has a Rockwell 60C surface hardness which is essential to reduce wear.

Big savings are offered over conventional methods which are plagued with erratic warpage, straightening and resultant grinding problems. Finished *60 Case* parts frequently cost less than the scrap losses that result from conventional methods.

Stocked in ¼" to 4" diameters. Available with or without special machining. *Write for literature and name of your local representative.*

TYPICAL 60 Case PARTS

GUIDE RODS, SHAFTING, ROLLS, TRAVERSE RAILS, PISTON RODS, ARBORS, LEADER PINS, TIE RODS, KING PINS, AXLES, CONTROL RODS, GUIDE POSTS, MANDRELS, BEARING ROLLERS, SPINDLES

For emergency needs call collect MAnhasset 7-1800

THOMSON INDUSTRIES, Inc.
Dept. C2, Manhasset, New York

PARTS HARDENED to 60 C...increase life...reduce cost!

▲ For more details circle NED-799 D on enclosed inquiry slip ▲

Jomac gloves stand up under treatment that even expensive leather gloves couldn't take!

The test shown above, in which a razor blade is drawn sharply across a Jomac glove without ill effect, shows the remarkable cut resistance of Jomac's loop-pile fabric . . . *protection that even leather doesn't afford.*

Moreover, Jomac gloves *wear longer* than leather gloves and provide a *better grip* on oily surfaces. And most Jomacs—like the HR gloves shown above—are reversible . . . so any two make a pair, any pair gives you four working surfaces.

Write today for free literature. Describe working conditions and materials handled: we'll make specific recommendations.

Jomac also makes a complete line of North PVC-coated gloves

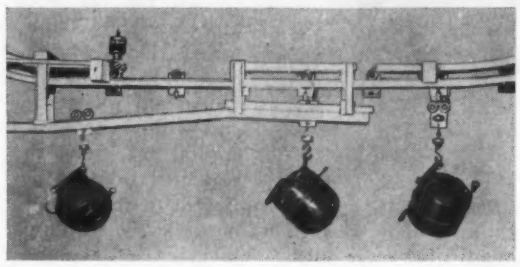
JOMAC INDUSTRIAL GLOVES

Jomac Inc., Dept. G, Philadelphia 38, Pa.

▲ For more details circle NED-800 D on enclosed inquiry slip ▲

OVERHEAD CONVEYOR TROLLEY combines power and free operation

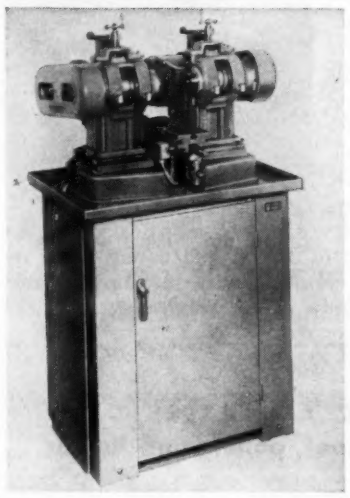
Piggy-back trolley for overhead conveyor application affords flexibility in new or existing systems. Trolleys are connected together and under power, and they



pick up and carry other trolleys which carry the load. Thus, the loaded trolleys can be conveyed from one operation to another, transferred from one conveyor system to another, deposited on a side track for storage, and picked up when needed. Controlled automatically, the two trolleys travelling piggyback can be separated or rejoined at any point. Trolleys permit a single power conveyor to function also as a free type. • **Econ-O-Veyor Corp.**, 224 Glen Cove Ave., Glen Cove, N. Y.

▲ For more details circle NED-801 D on enclosed inquiry slip ▲

DUAL HEAD MILL 1000, 1725, and 3000 rpm speeds standard on two-spindle machine



High production machining of two surfaces simultaneously is possible with the Model PMD dual head mill. Standard speeds with stepped pulleys are 1000, 1725, and 3000 rpm, but nine lower speeds are obtained with an optional low speed drive. Special motors provide higher or lower speeds. Minimum and maximum distances between spindle faces are 2½ and 5¾ in.

Distance from top of table to center line of spindle is 1⅜ in. minimum and 4⅝ in. maximum. Head has a 3¼-in. travel. Hand, screw feed, or air-hydraulic operated table has a 4 x 12-in. working surface, ½-in. T-slot, and 5-in. longitudinal travel. Nickel steel spindle takes 1/16 to ½-in. collets and the collet draw tube takes ½-in. diameter stock. Weight without pedestal base is 325 lb. • **Barker Engineering Co.**, 26470 Lakeland Blvd., Cleveland 32, Ohio.

▲ For more details circle NED-802 D on enclosed inquiry slip ▲

BY POPULAR DEMAND! 8 CU. FT. VOLUME . . . AT LOW COST

BLUE M STABIL-THERM® BATCH TYPE OVENS with HORIZONTAL AIRFLOW

Large Volume Capacity. Reliable mechanical convection batch ovens for production and tests associated with electronic paint, steel, rubber, aircraft, chemical and other industries. Elimination of alloy interiors and wattage proportioning reduced our cost and yours. However, care has been exercised to provide an adequate design suitable for reproducing good uniformity and control action. Utilizing horizontal airflow, quality motor/blower, ETERNA heater banks on a relatively uncomplicated control system, we offer a **good unit at reasonable cost.**

TEMPERATURE RANGES

	Model Number	Watts Max.	Voltage 60 cy. A.C.	Complete Price
100°F. to 300°F.	OV-586	1750	115V/1 Ph.	$498.00
	OV-587		230V/1 Ph.	508.00
100°F. to 500°F.	OV-588	4000	230V/1 Ph.	595.00
	OV-588A		230V/3 Ph.	615.00

All Models: 24" x 25" x 24" (I.D.)

BLUE M Electric Company BLUE ISLAND, ILL.

MANUFACTURERS AND DESIGNERS COMPLETE TEMPERATURE CONTROL EQUIPMENT

▲ For more details circle NED-803 D on enclosed inquiry slip ▲

EASTERN CENTRIFUGAL JOB-RATED PUMPS

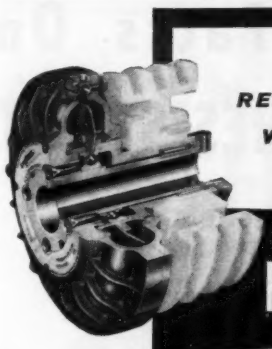
Original equipment manufacturers have chosen the Eastern D-11 Centrifugal Pump for 24,897 successful installations. With eighteen pounds of compact design (9¾" x 4⅝"), this close-coupled, single-stage centrifugal pump with induction type motor provides an ideal job rating for many installations.

The D-11 and other Eastern Centrifugal Pumps are available in 18-8 Type 303 and Type 316 Stainless Steel, Monel, Hastelloy "C", Cast Iron and Bronze. They range from ⅛th to ¾ H.P. with capacities up to 70 G.P.M., pressures to 65 P.S.I.

SEND FOR BULLETIN 120-R

Eastern INDUSTRIES, INC.
100 SKIFF ST., HAMDEN, 14, CONN.

▲ For more details circle NED-804 D on enclosed inquiry slip ▲



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FLEXIDYNE

THE DRY FLUID DRIVE

The new way to start loads *smoothly*—to protect against shock and overload—to use smaller motors—to save power—*all without any sacrifice of efficiency at full load!* Flexidyne can mean thousands of dollars to you in equipment savings, in economical operations. From fractional to 1000 hp. Many sizes available from distributors' stocks. Write us for technical bulletin.

DODGE MANUFACTURING CORPORATION, 2100 Union, Mishawaka, Ind.

DODGE of Mishawaka, Ind.

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Maintenance engineers— get practical help with water treatment problems! Send for FREE BOOKLET today

Condensers choked with scale or slime? Pipes clogged? Coils heavy with deposits? Whether it's air-conditioning or refrigeration systems, boilers or heating systems, "Virginia" can help you solve the problem of water treatment. Get your copy of "Water Cooling Problems—How to Correct Them." Learn what new chemicals are available, how easily they can be used, how effective they are. They are stocked by wholesalers everywhere. Or ask to have a trained "Virginia" man call on you to discuss your problem.

VIRGINIA SMELTING COMPANY
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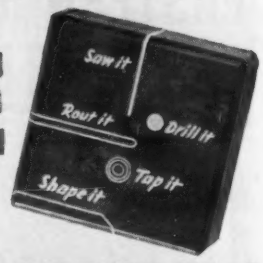
FREE block of



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You don't have to take our word for the cost-cutting properties of Masonite® Benelex®, the famous high-density laminate. Send for your free test block. Heft it; it's one-sixth the weight of steel. Work it in your own shop; it machines beautifully. What's more, we'll send you a free booklet giving all specifications and suggestions for use. Address Masonite Corporation, Dept. NED-4, Box 777, Chicago 90, Ill.

FREE BOOKLET SHOWS USES

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SILASTIC® SILICONE RUBBER

- Resists fuels, oils, solvents
- High heat resistance
- Low temperature flexibility
- Available as extrusions, moldings
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FREE SAMPLE and data on Silastic LS-53 and Silastic LS-63, the Dow Corning fluorocarbon silicone rubbers. Write Dept. 5404.

first in silicones Dow Corning CORPORATION MIDLAND, MICHIGAN

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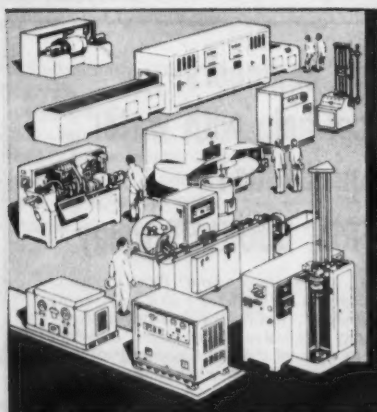

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INDUCTION HEATING EQUIPMENT

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- Over 5,000 installations.
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- Write for New 56-page Catalog of exclusive features, facts and specifications.

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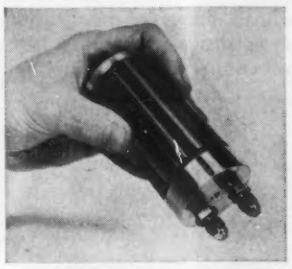
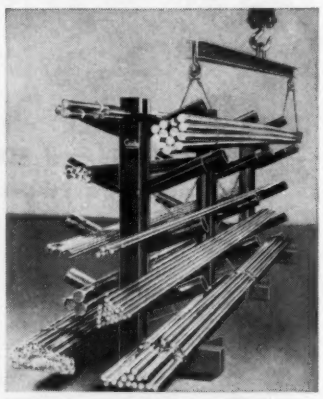
FLOW CONTROL VALVE with micrometer adjustment of flow



Length of the viscous passage in this Micrometer flow control valve is increased ten-fold with 15 turns of the adjusting wheel. Flow passage area remains constant. Using Univis 40 oil at 115° F and with a pressure drop of 100 psi, flow can be regulated from 10 to 100 cc/min through 15 turns, equivalent to about 6 cc/min per turn. Flow is further increased to 1150 cc/min through nine more turns. Valve is also adaptable for use as a variable damping passage in electro-hydraulic servo systems. • **Sanders Associates, Inc.**, 95 Canal St., Nashua, N. H.

▲ For more details circle NED-810 D on enclosed inquiry slip ▲

BAR, TUBE & PIPE RACKS handle 16, and 20-ft bundle lengths



Telescoping extensions on Bartender racks speed handling of bar, tube, and pipe bundles without unstacking the rack, and make lower vacant storage space immediately available for servicing with cranes or hoists. Three models handle bundle lengths of 16, 20, and 20 ft and 53,000, 80,000, and 106,000 lb, respectively, using two, three, and four vertical rack panels. Lengths are 104, 168, and 188 in. and width is 48 in. Racks hold ten bundles weighing up to 2½, 4, and 5 tons each, respectively. Shipped knocked down, racks are painted safety yellow. • **Cady Metal Fabricating, Inc.**, 88 Schenck St., North Tonawanda, N. Y.

▲ For more details circle NED-811 D on enclosed inquiry slip ▲

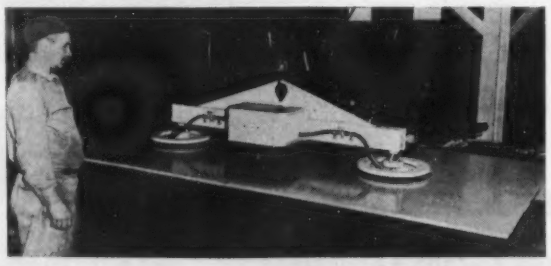
ELECTROSTATIC AIR FILTERS trap dust, soot, pollen, and fungus

From one-half to three-fourths of the invisible particles in air are filtered out by these electronic air filters, as well as over 98 per cent of all visible dust, soot, pollen, and fungus. Current automatically shuts off so collector section can be removed for cleaning. Installed in forced air ducts, the units operate whenever the blower is operating. Line consists of 22 x 20 x 21, 22 x 24 x 26, and 22 x 24 x 29-in. units, all operating on 115 v. Largest size handles up to 2400 cfm. • **Borg-Warner Corp.**, York Div., Box 1592, York, Pa.

▲ For more details circle NED-812 D on enclosed inquiry slip ▲

VACUUM LIFT SAFETY UNIT provides emergency vacuum reserve

Vac-U-Lift systems handling steel plate, tanks, concrete, glass, and other nonporous materials are given an additional built-in vacuum reserve by this Safti-Pac.



The emergency unit is attached directly to the pad beam and maintains constant vacuum pressure on the pad and the material in-lift, even though vacuum hose is completely severed. As soon as vacuum pressure reaches capacity in the main system, the Safti-Pac reserve system stores and maintains its capacity load, ready for any emergency. •**Vac-U-Lift Co., Salem, Ill.**

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NEW PORTABLE HYDROCARBON DETECTOR

detects and measures hydrocarbon traces in gases and atmospheres

The new Perkin-Elmer® Model 213 Hydrocarbon Detector detects and accurately measures—in less than 10 seconds — fractions of parts per million of such organic compounds as hydrocarbons, aldehydes, ketones, amines in gases and atmospheres.

Sensitivity range is adjustable from as low as 0-1 ppm full scale to 10% full scale!

Easy as a suitcase to carry — weighs only 47 lbs.
Easy to use — non-technical personnel master it quickly.

HUNDREDS OF APPLICATIONS EVERYWHERE!

- air-pollution studies — industrial areas, plants, tunnels, garages, highways
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- checking leaks — packaging, gas transmission lines, storage areas, refrigeration equipment
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INSTRUMENT DIVISION
Perkin-Elmer Corporation
NORWALK, CONNECTICUT

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THREAD AND GROOVE
GAGES
GRANITE SURFACE
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Savings you can count on—accuracy you can guarantee! You get *both* with fast, easy-to-read Bryant precision gages and long-lasting, "head of the grain", true quartz granite Surface Plates.

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. . . for complete details and prices on the full line of Bryant Internal and External Thread and Groove Gages, and Granite Surface Plates.

EX-CELL-O CORPORATION
GREENVILLE PLANT
GREENVILLE, OHIO

60-6

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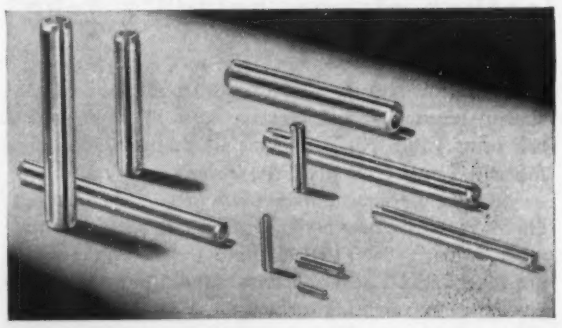
Now! For superior electrical properties...



SEL-LOK spring pins in beryllium copper

- High conductivity.
- Nonsparking and nonmagnetic.
- Self-locking.
- Excellent corrosion resistance.
- Swift, economical fastening (just drill and drive).
- 60% the strength of carbon steel.
- 101 uses—as keys, axles, cotter pins, hinge pins, stop pins, pivots, etc.
- Sizes from 1/16 x 3/16 to 1/4 x 3½ in.

Send for Bulletin 2331—complete information on SEL-LOK spring pins, including those made of carbon and corrosion-resistant steel.

INDUSTRIAL FASTENER Division sps
JENKINTOWN 24, PENNSYLVANIA

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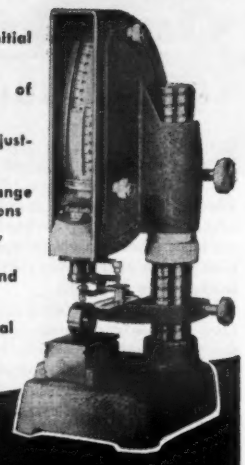
Leitz TOLERATOR
THE TRU-VISION
COMPARATOR GAGE

Capacity 6" Diameter



- Positive action through low-ratio initial amplification of 4:1
- Additional optical amplification of 250:1 = total of 1000x
- Rapid quantity gaging between adjustable colored tolerance masks
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STRIP HEATERS

Efficient Electric Heat . . . in Many Shapes and Sizes

- **Long Life Construction.** Nickel-chrome wire, completely enclosed in mica, accurately positioned within skin-tight metal sheath.
- **Faster Heat Transfer.** Space saving design plus the high dielectric strength of mica allows a thin cross section resulting in a strip heater which gives faster response to control, maximum efficiency and minimum time-lag.
- **Many Special Features for Special Jobs.** Examples: mounting holes; post, bracket or button terminals; choice of sheath materials. Also custom lengths, widths, voltages, wattages. Tell us your needs.

Strip • Cartridge • Tubular • Immersion & Cylindrical Electric Heating Units
Write for Literature

WATLOW 8021
ELECTRIC MANUFACTURING CO.
1374 Ferguson Avenue St. Louis 14, Missouri

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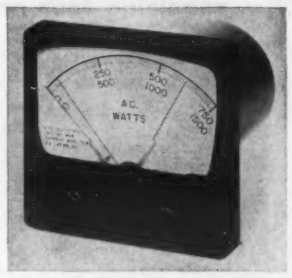
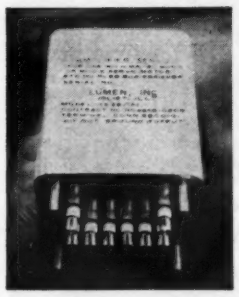
CONTACT-MAKING WATTMETERS
ac and dc units indicate and control



Product of as many as four different variables can be monitored by this contact - making wattmeter. Capable of both indicating and controlling power in the lower milliwatt range, it is also available in modified form as a true rms voltmeter or ammeter, or as a varmeter. Greatest standard full scale sensitivity is 500 milliwatts, either alternating or direct current, but modifications permit ranges as sensitive as 100 milliwatts dc. Instrument can be built to operate on any frequency from dc to 1000 cps. Panel mounting unit has a 4½-in. meter and a barrel less than 5 in. long. • **Assembly Products, Inc.**, Chesterland, Ohio.

▲ For more details circle NED-820 D on enclosed inquiry slip ▲

MAGNETIC AMPLIFIER
has dynamic braking characteristics



Model 1339 magnetic amplifier is a sensitive, static, servo drive controller which gives 0.080 to 0.120 amp dc dynamic braking output with zero input signal. Excitation voltage is 115 v ac, ±5 per cent, and excitation frequency is 400 cycles, ±5 per cent. Signal voltage required to obtain 3 to 30 v ac output (phase reversible) is ±0.015 to 0.15 v ac. The encapsulated, metal-cased unit has a −55 to 100° C temperature range. • **Lumen, Inc.**, Moen Avenue, Joliet, Ill.

▲ For more details circle NED-821 D on enclosed inquiry slip ▲

PERMANENT MAGNETIC BAR
easily installed for many uses

Holding or controlling parts in handling and conveying operations and removing iron fines or small tramp iron pieces are applications for the Magna-Bar, a compact permanent magnet unit. Easily installed, it is powered with Erium 25, a Ceramic-V barium ferric oxide magnetic material. Steel pole plates are bonded to the magnetic element with epoxy resin. It has a 1 x 1-in. cross section, is made in 4 to 72-in. widths in 2-in. increments, and is supplied with nonmagnetic stainless steel mounting brackets adjustable in depth from ¼ to ½ in. Brackets are removable for stud mounting. • **Eriez Mfg. Co.**, 420 Commerce Bldg., Erie 6, Pa.

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3½
DRILL MASONRY HOLES UP TO 3½" Dia. SAVE UP TO 70% with NEWEST LOW-COST TRUCO® MODEL "S" and FAMOUS TRUCO DIAMOND BITS

1. Drill VERTICAL Holes
2. Drill HORIZONTAL Holes
3. Use as HAND HELD DRILL

Truco Model "S" Portable Diamond Drilling Machine is light-weight, compact; works where bigger units can't go or aren't needed. Can easily save its cost on first job; drills reinforced concrete, brick, terrazzo, all tiles. Quiet, clean, fast; no after-patching. Boon to plumbers, electricians, builders, maintenance crews. Many accessories.

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TRUCO
HALF-A-CENTURY OF INDUSTRIAL DIAMONDS

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ALBION'S NEW ALaTHANE* WHEELS

* POLYURETHANE ESTOMER

WEAR LIKE STEEL . . .
PROTECT LIKE RUBBER

Truly a *wonder wheel* for all rugged industrial applications where high capacity and floor protection is a "must". Albion's amazing new ALaTHANE wheels are conservatively rated for 5 times the service life of rubber and they're extremely resistant to abrasives, have load capacities of steel wheels, resist a permanent "set" under static loads and are impervious to practically all chemicals, solvents, etc.

Better yet... ALaTHANE wheels—or complete casters, are immediately available from stock in 6" to 12" wheel diameters with clean, machine-faced steel hubs and roller bearings.

So—if you want the quiet resiliency and protection of rubber, the capacity and lasting durability of steel, plus a new wheel economy . . . you'd better specify Albion's ALaTHANE.

Remember . . .
ALaTHANE *for both wheels and complete casters!*

Write today for your free copy of the new ALaTHANE wheel and caster folder.

ALBION INDUSTRIES, inc.
ALBION, MICHIGAN

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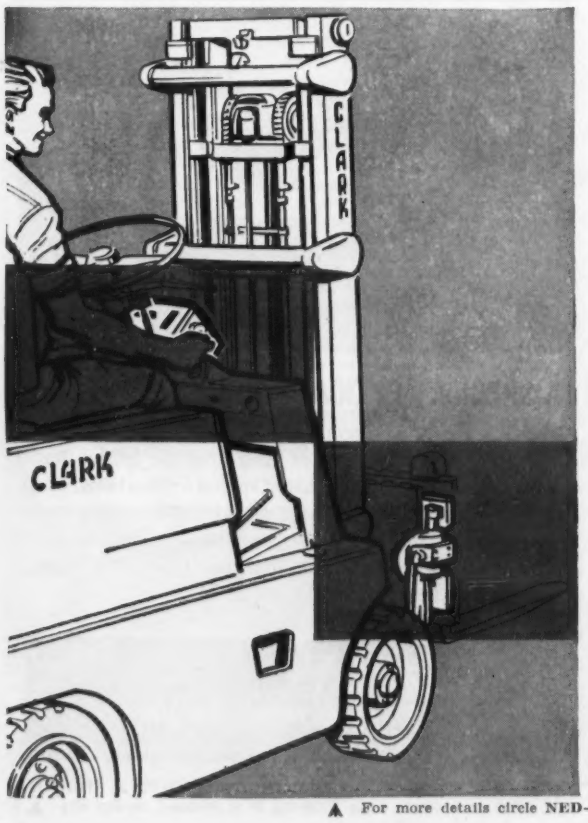


New Clark Fork Truck attachment gives . . .

Accurate weighing without floor scales!

Now you can accurately weigh material *while it is being handled by your Clark fork lift trucks.* You eliminate the need for expensive floor scales . . . are able to quickly weigh material at any location in your factory, warehouse or storage yard.

This new Weighing Attachment is guaranteed to be accurate to 2/10's of 1% of rated capacity.

It is fast and simple to use. The entire device consists of only two major components. There are no springs or moving parts. Special overload stops protect the device against vertical and horizontal shock loads. And most important: *load positioning is not critical.* The attachment will give accurate weight regardless of where the load is placed on the forks.

A new booklet gives full details. For your copy use the reader service card or the coupon below.

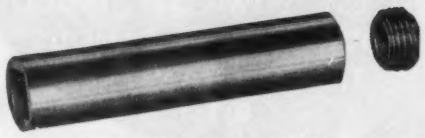
Without obligation, rush full details on your Weighing Attachment.

Name _____ Title _____
Company _____
Address _____
City _____ Zone ____ State ____

CLARK® EQUIPMENT
ATTACHMENTS SECTION
Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 21, Michigan

▲ For more details circle NED-819 D on enclosed inquiry slip ▲

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES: 3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE, INC.
23514 TELEGRAPH RD., SOUTHFIELD, MICH.

For more details circle NED-825 D on enclosed inquiry slip

NEW

ALUMINUM CAST IRON

QUICK-ACTING HAND KNOBS

JIG AND FIXTURE COMPONENTS
- LATCH BOLTS
- CAST IRON HAND KNOBS
- ALUMINUM HAND KNOBS
- QUARTER TURN SCREWS
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- JIG FEET (3 TYPES)
- SPHERICAL WASHERS
- FIXTURE KEYS
- KNURLED HEAD SCREWS
- TOGGLE SHOE CLAMPS & V-PADS

HOLD DOWN AND CLAMPING TOOLS
- T-NUT & STUD SETS
- STEP BLOCK & CLAMP SETS
- FLANGED NUTS
- CUT THREAD STUDS
- TEE NUTS
- COUPLING NUTS
- ADJUSTABLE STEP BLOCKS
- STRAP CLAMPS (PLAIN & STEP TYPE)

CATALOG INSERT
NEW 16 PAGE CATALOG
CATALOG INCLUDES TRACING TEMPLATES

FREE! WRITE TODAY

Northwestern
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For more details circle NED-826 D on enclosed inquiry slip

Compact, economical, safe. All revolving parts are covered. Instantly adjustable. Shreds ⅛" to ⅜". Designed for continuous and trouble-free service.

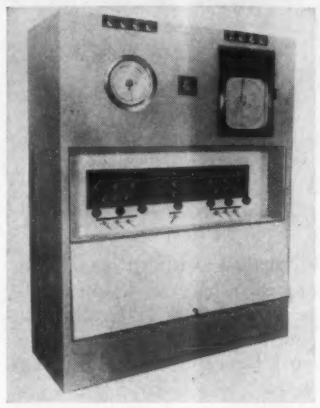
Quickly shreds newspapers, magazines, waste paper, cellophane, tissue, corrugated cartons, wax paper, etc. into uniform resilient 1/8" to 3/8" strands, ideal for packaging purposes. Especially adapted to shredding confidential records, blue prints or any classified material. Send for descriptive bulletin S1255. Names of users near you available on request.

FREE TRIAL! Operate a SHRED ALL for 30 days — if not satisfied — return — owe nothing.

UNIVERSAL SHREDDER CO.
2934 Bay Road — Saginaw, Michigan

For more details circle NED-827 D on enclosed inquiry slip

BATCH-WEIGHING SYSTEM automates bulk product formulation requiring four or more ingredients

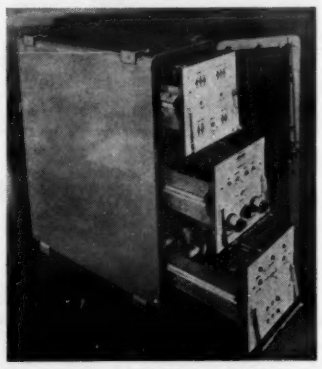


Multi-ingredient product formulation using bulk materials is performed automatically by this batch-weighing system, capable of ±0.25 per cent weighing accuracy. It will batch-weigh two, three, four, or more ingredients, in programmed sequence and in any desired proportions. System can be easily matched to the job by interchanging the feed and discharge devices, weigh hoppers, and weight transmitters, which are all individual equipment packages or building blocks.

Standard readout and control facilities for each ingredient include net-weight indication, batch-weight set, tare adjustment, hopper fill and discharge signalling, and selection for manual, automatic, or semiautomatic control. ● **Weighing & Control Components, Inc.**, 718 E. County Line Rd., Hatboro, Pa.

For more details circle NED-828 D on enclosed inquiry slip

SPOTWELDING CONTROL assures quality welds despite actual in-process variables



Employing the feedback principle, this Monautronic V-2 electronic spotwelding control produces quality welds regardless of in-process variables. The modular, rack - panel control compensates for line voltage fluctuations, changes in applied electrode force, electrode wear, variations in surface finish, fitup, thickness or hardness of materials, metal surface contamination, and proximity of other welds.

Unit cannot produce a substandard weld without immediately "locking out." It will also lock out in conveyor-line failures to prevent overwelding in the same spot. With proper heat setting, control greatly minimizes sparking or "spits" at the electrodes. With average settings, unit holds electrode voltage constant within ±10 mv. It measures 30 x 25½ x 12 in., weighs 200 lb, and operates on 220-240 or 440-480 v single-phase ac. ● **Budd Co.**, 2450 Hunting Park Ave., Philadelphia 32, Pa.

For more details circle NED-829 D on enclosed inquiry slip

Cut hours off condenser tube cleaning time with this efficient, one-man operated AIRETOOL Condenser Cleaner. Weighs only 10 lbs. . . . powerful pneumatic motor drives tool through even completely plugged tubes quickly. Built-in flushing system keeps drill cool and removes debris. Quiet operating motor, accurate trigger control and balanced design assures easy, untiring operation.

from clogged tubes to clean faster, easier, with this

AIRETOOL Condenser Cleaner

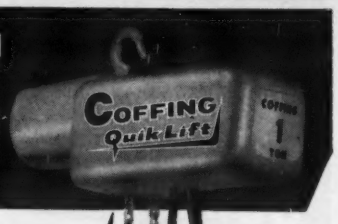
Depend on AIRETOOL equipment to solve all your tubular maintenance jobs quicker . . . easier . . . better. Contact your nearby Airetool representative or write for information on AIRETOOL tube cleaning, cutting and expanding tools.

AIRETOOL MANUFACTURING COMPANY
316 S. Center St.
SPRINGFIELD, OHIO

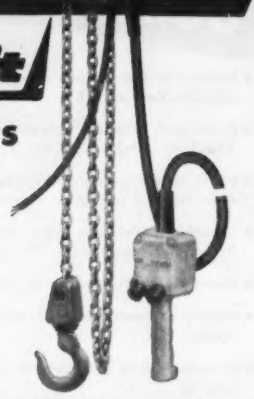
BRANCH OFFICES: New York, Chicago, Tulsa, Philadelphia, Houston, Baton Rouge.
REPRESENTATIVES: in principal cities of U.S.A., Canada, Mexico, Puerto Rico, South America, England, Europe, Italy, Japan, Hawaii.
EUROPEAN PLANT: Vlaardingen, The Netherlands.
CANADIAN PLANT: 37 Spalding Drive, Brantford, Ontario.

For more details circle NED-830 D on enclosed inquiry slip

Load Handling is Easy— Safe with COFFING . . .



Quik Lift ELECTRIC HOISTS

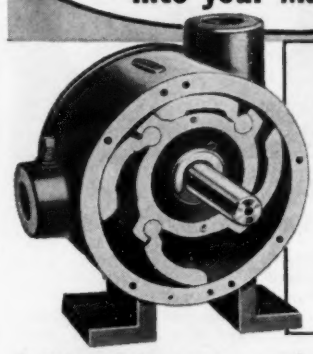


It's easy to raise or lower loads while pulling a trolley mounted Coffing Quik-Lift Electric Hoist. The design of the pistol-grip control station and the combination strain and power cable makes this possible.
For safety the control station is made of non-conducting plastic in which the voltage is reduced to 115 volts. The V-type brake gives positive control of loads. Twenty models—¼ to 2 ton capacity. Ask your distributor or write for bulletin ADH-65.

COFFING HOISTS
DUFF-NORTON COMPANY
803 Walter Street • Danville, Illinois

For more details circle NED-831 D on enclosed inquiry slip

Here's why LEIMAN AIR PUMPS Put "Lifetime" Dependability into your Machines!



HINGED, CURVED VANES OF DURABLE CAST IRON

Take up their own wear!

Four curved vanes on easy-action hinges maintain sealed contact with cast iron cylinder walls by centrifugal force. They hone themselves to hard, glassy smoothness to take up their own negligible wear. 2 to 3 times more air space is provided.

Typical reports from users:
"Never wear out or give trouble"
"Used 350 pumps without a complaint"
"Pumping 24 hours a day for 21 years"
"12 years without attention, except oiling"

LEIMAN Rotary Positive AIR PUMPS

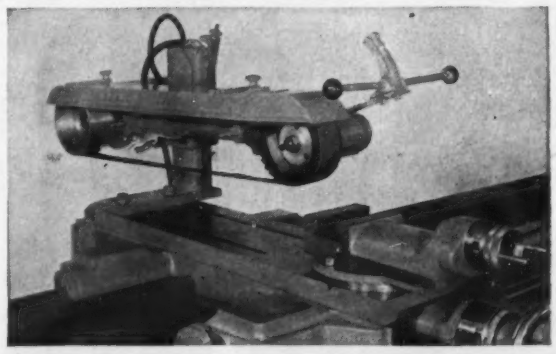
Vacuum to 29.9" Hg.
Pressure to 20 p.s.i.g.
Volume to 162 c.f.m.

Leiman Air Pumps will last for the life of your equipment — providing fully-rated vacuum (suction) or pressure with little or no maintenance. Compact design has fewer moving parts. Air flow is smooth — operation extremely quiet. Every pump tested. Models and sizes to meet varying requirements. Engineering assistance on any design or application problem.

WRITE FOR NEW CATALOG plus Application Book showing hookups.

LEIMAN BROS., INC.
167 Christie St., Newark 5, N.J.
Established 1887

For more details circle NED-832 D on enclosed inquiry slip



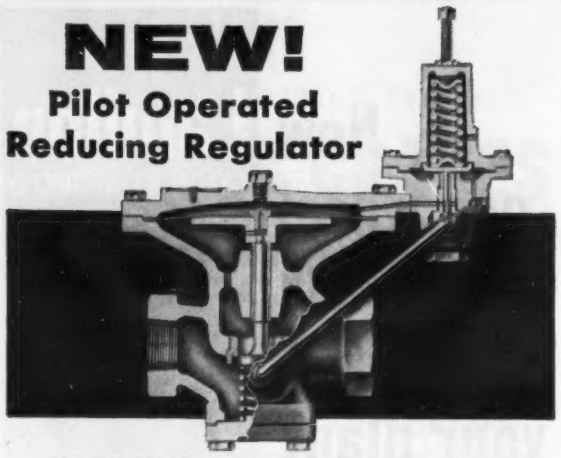
A SPECIAL APPLICATION OF THE 6-72 UNIT

The G & P 6-72 Abrasive Belt Unit is a machine in its own right, mounted on a stand or hung from the ceiling. But it lends itself ideally to hundreds of special applications, where it can become as handy as a third arm. Illustration shows the G & P 6-72 mounted on a lathe, courtesy Sidney Machine & Tool Co., of Sidney, Ohio. Write for informative Bulletin No. 104 and Price List.

Grinding and Polishing Machinery Corp.
SUCCESSORS TO VONNEGUT MOULDER CORPORATION
2530-J WINTHROP AVENUE, INDIANAPOLIS 5, INDIANA

For more details circle NED-833 D on enclosed inquiry slip

NEW!
Pilot Operated Reducing Regulator



No. 201-21 Pilot Operated Reducing Regulator features an easily accessible external pilot, bolted directly to the main valve; stainless steel pilot and main valves; fast, accurate response to pressure changes; large capacity, and tight shutoff. Made with iron bodies with screwed connections ¾" through 2" size; ASA Class 250 flanges, sizes 2" to 4". Pressure ranges 2-12; 8-50 and 25-150 psi.

Ask your Mason-Neilan Industrial Distributor. He is ready to serve you and to ship promptly from stock. Ask for catalog or write direct.

MASON-NEILAN
Division of Worthington Corporation
69 NAHATAN ST., NORWOOD, MASS.
Order from your Mason-Neilan distributor — use his experience — save work — save time. MN9-12

▲ For more details circle **NED-834 D** on enclosed inquiry slip ▲

SAVE YOUR OLD WOOD, CONCRETE FLOOR!... RESURFACE IT!

Get the heaviest duty wearing surface for foot and wheel traffic with these Flintkote Flooring Products —all are trowel finished. • Asphalt Mastic Flooring (FLINTMASTIC†) • Latex Industrial Flooring • Epoxy Flooring—for problem floors.

For complete information on mixes, coverage, uses and speed of application, write: The Flintkote Company, Industrial Division, 30 Rockefeller Plaza, New York 20, N. Y.

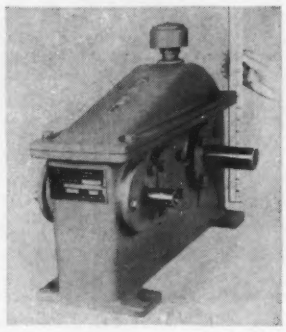
†A trademark of the Flintkote Company

FLINTKOTE

Manufacturer of America's Broadest Line of Building Products

▲ For more details circle **NED-835 D** on enclosed inquiry slip ▲

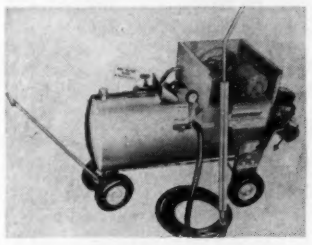
SPEED REDUCER
rated 3.9 hp with 30:1 ratio



Compact, helical geared, parallel shaft speed reducer is rated 3.9 hp with 1750 rpm input and 30:1 ratio. Overall height of the DL-4 speed reducer is 15⅛ in. The smallest unit in the company's helical and herringbone reducer line, unit is usable as drive for cement mixers, conveyors, hoisting equipment, car pullers, rotary kilns, and ball mills. • **Alten Foundry & Machine Works, Inc.**, W. Wheeling Street, Lancaster, Ohio.

▲ For more details circle **NED-837 D** on enclosed inquiry slip ▲

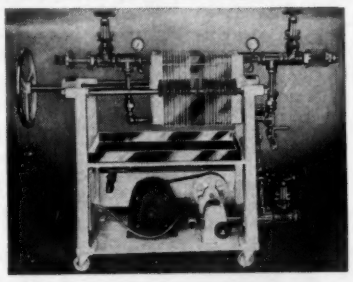
STEAM CLEANER
hot water rinse now standard



A hot water rinse attachment is now standard equipment on the Electro - Magic steam cleaner at no increase in price. Operator can rinse or flush by turning a valve. Coils of the cleaner itself can also be cleansed of solvents and other solutions with the attachment. Cleaner models will supply up to 100-psi steam pressure in 90 sec at a touch of the controls. Pushbutton controls are also standard. • **Electronics, Inc.**, Vermillion, S. Dak.

▲ For more details circle **NED-838 D** on enclosed inquiry slip ▲

DUPLEX FILTER
can have pump, motor, and control



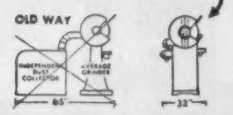
Single or double filtration is possible with this EFS duplex filter. It is suited for use where some liquids require both primary and polishing filtration, and is offered with single standard or sludge type frames. Filter medium forms a seal around the edges of the frames to prevent loss of liquid. Complete closure is effected with handwheel. Furnished with or without pump, motor, and pressure control, it can also be equipped with stone fiber eliminator for pyrogen work. Sizes are available for holding ten to one hundred 12-in. square filtering surfaces. Liquid-contact parts can be stainless steel or nickel plated bronze. • **Ertel Engineering Corp.**, 90 Front St., Kingston, N. Y.

▲ For more details circle **NED-839 D** on enclosed inquiry slip ▲

Hammond of KALAMAZOO

2 IN 1 NO-DUST GRINDER

SAVE OVER 50% FLOOR SPACE THE HAMMOND WAY

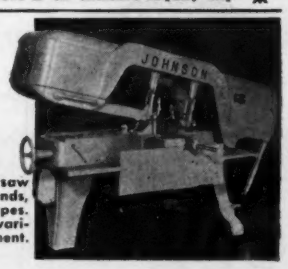


DUST-LADEN AIR IS A MENACE!
- Protect your employees' health.
- Protect nearby machine tools from dust and grit.
- Save floor space — requires only 6½ square feet. For 10", 12", and 14" wheels. Write for Catalog.

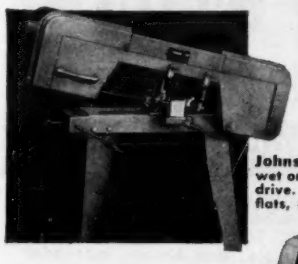
Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

See us at the ASTE Show, Detroit, Booth 1027, April 21-28

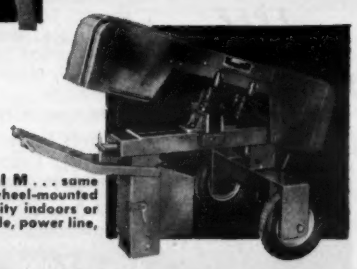
▲ For more details circle **NED-840 D** on enclosed inquiry slip ▲



Johnson Model J... A big, rugged saw that cuts anything—anywhere! 10" rounds, 18" flats, heavy structurals and odd shapes. Available in wet or dry cutting models, variable speed drive and optional equipment.



Johnson Model B . . . Also available in wet or dry cutting models, variable speed drive. Will easily handle 5" rounds, 10" flats, odd and irregular shapes.



Johnson "Mobile" Model M . . . same capacity as Model B, but wheel-mounted for fast, easy maneuverability indoors or out. Has self contained handle, power line, tool box for accessories.

MORE SAW for LESS MONEY

Only Johnson offers so much saw for so little money. Whether your requirements call for the tremendous performance of the big Model J, the amazing Model B, or the versatile "Mobile" Model M, there's a Johnson saw model, wet or dry, to match your metal cutting needs.

Remember...Johnson offers three husky, handsome models that'll do the job faster, better. They're beautifully engineered, semi-automatic, have centralized controls—plus many exclusive features that pay production dividends to *you!*

Priced right? Certainly! Compare them all before you buy and you'll agree, Johnson offers more saw for less money.

Write today... Ask for illustrated literature, specifications and prices on the full line of Johnson saws. Ask the man who has one... You'll be glad you did!

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JOHNSON MANUFACTURING CORPORATION
Barnes & Taylor Sts.
Albion, Michigan

Johnson METAL CUTTING BAND SAWS

▲ For more details circle **NED-841 D** on enclosed inquiry slip ▲

GRIPPER® woven wire SLINGS

here's GENTLENESS for any lifting job

With a Gripper Sling, even delicate motor parts, polished stock or thin walled tubing can be moved without load damage. The smooth, broad bearing surface doesn't cut or score the load. Spiral wire construction gives the Gripper Sling complete flexibility . . . allows the sling to wrap around the load and hold it in a firm, but gentle, grip. Gripper Slings are extra safe because there's nothing to snap or tear suddenly and drop the load.

Gripper Slings, pretested to meet load specifications, are available in standard lengths and widths with capacities up to 100,000 lbs. Special sizes, alloys or Neoprene or PVC covered slings available. Write for FREE CATALOG and name of your nearest materials handling distributor.

The Cambridge Wire Cloth Co.
Department C • Cambridge 4, Md.

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FLUID POWER SYSTEM COMPONENTS — a new compact directory of the complete line of standard Oilgear, and Oilgear Servocontrol Division equipment. This abridged edition of more than 25 individual bulletins contains illustrations, and all principal specifications and operational data.

- 16 PAGES
- PUMPS
- PUMP CONTROLS
- MOTORS
- TRANSMISSIONS
- CYLINDERS
- SERVO COMPONENTS
- VALVES
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Request Oilgear Bulletin 10051-H

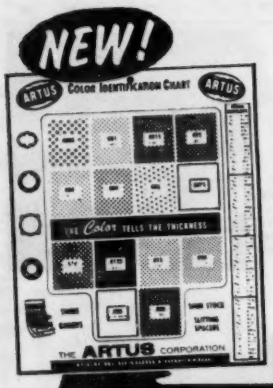
THE OILGEAR COMPANY

Application-Engineered Fluid Power Systems

(the standard for comparison in all industry)

1582 W. PIERCE ST. • MILWAUKEE 4, WISCONSIN

For more details circle **NED-842 D** on enclosed inquiry slip



A 'MUST' WHEREVER SHIMS ARE USED

ARTUS PLASTIC SHIMS

THE COLOR TELLS THE THICKNESS

FREE Write for this handy COLOR CHART, today!

Artus Plastic Shims are real time savers in production and maintenance. They're used by many of America's best known industrial corporations because they're more efficient, more convenient, always available.

Custom shapes to your specifications.

Write for Samples and Literature or Mail Blueprint for Test Sample.

THE **ARTUS** CORPORATION
201 South Dean St. · Englewood, New Jersey
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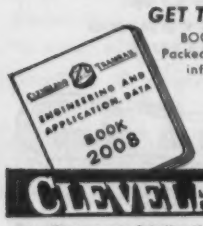
formerly INDUSTRIAL PRODUCTS SUPPLIERS

For more details circle **NED-843 D** on enclosed inquiry slip

Often as many as six men are required to handle a heavy timber through a saw by ordinary handling methods.

One lumber company was able to transfer 12 men to other important duties by installing four Cleveland Tramrail Cranes with electric hoists. Three men can now handle the huge timbers easily and safely.

GET THIS BOOK! BOOK No. 2008 Packed with valuable information...

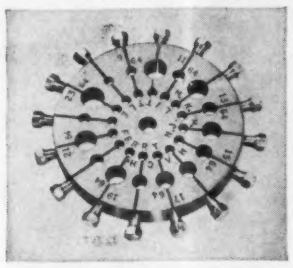


CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6617 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle **NED-844 D** on enclosed inquiry slip

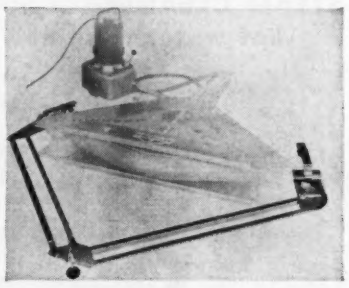
REAMER LAPPER
used on reamer in machine



Six different models of the Clusterlap have a range from 1/32 to 1 in. for lapping oversize reamers to precision size without removing them from the machine. Each has 16 adjustable sizes. Tool can also be used for lapping standard drills to off sizes and for final sizing and super finishing of plug gages. • M K M Machine Co., 325 Main St., Little Ferry, N. J.

For more details circle **NED-845 D** on enclosed inquiry slip

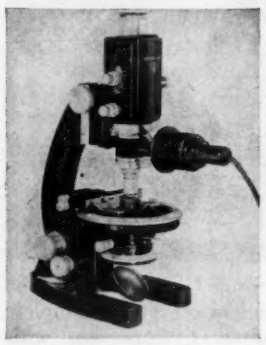
PIPE BEND INDICATOR
gages angle for ½ to 6-in. pipe



Degree of bend on any ½ to 6-in. diameter pipe is shown by the No. 1807 pipe bend indicator. Scale fits any hydraulic pipe and conduit bender operating in a horizontal position. Time-consuming figuring is eliminated, and pipe need not be removed to determine the degree of bend. Large sweep bends can be measured by following simple instructions. • Greenlee Tool Co., 2136 12th St., Rockford, Ill.

For more details circle **NED-846 D** on enclosed inquiry slip

POLARIZING MICROSCOPE
coated optics provide good colors on the 5, 7.5, and 10 X instrument



Fine adjustment, swing-in circular polarizer, and a rack and pinion focusing Bertrand lens are features of the LR Model polarizing microscope. Balcoted optics provide good interference colors, make low birefringent materials easy to see, and provide sharply defined images and figures. A flip-in Polaroid analyzer rotates through 94 degrees and has 5-degree graduations. Quick-change adapter accommodates either the centerable type nosepiece or a vertical illuminator.

Ball bearing stage has vernier setting. Arm permits 360-degree rotation of mechanical or universal stage. Huygenian eyepieces with spiderweb crosshairs and focusing eyelenses are supplied in 5, 7.5, and 10 X. An integral light source and standard size eyepieces are optional. • Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.

For more details circle **NED-847 D** on enclosed inquiry slip

BENDING BRAKE
makes intricate shapes without dies

Intricate shapes are quickly and accurately turned out without dies or tooling by Form-All bending brakes. Narrow webbed deep channels, closed rectangular tubes, and double jacketed channels are typical of work that can be produced. For angle bending from 0 to 155 degrees, a pair of wings pivot about a point off the tip of a holding blade. For radius bending, the wings travel along a curve of the desired radius. Various sizes in hand, air, and hydraulically powered models are available. Illustrated model has 4-ft by 16-gage capacity with hand clamp and air operated wings. Other models have capacities to 20 ft by ¾-in. steel plate. • Lake Erie Machinery Corp., Box 68, Kenmore Station, Buffalo 17, N. Y.

For more details circle **NED-848 D** on enclosed inquiry slip

Now one wheel for any section of your plant

Now you standardize on one wheel for all your materials handling equipment. Fairbanks "Lamilon" Wheels protect your floors, for they stay smooth and concentric, don't mar or mark. Not affected by oils and greases, "Lamilon" Wheels have very high resistance to most chemicals, and have a water absorption factor almost as low as high quality rubber. With their alloy steel roller bearings, hardened steel outer race and provision for pressure lubrication, "Lamilon" Wheels roll easier, last longer and give more dependable service than any other plastic wheel.

Available in sizes 3 through 12 inches. Can be furnished with thread-tight thread guards.

THE **FAIRBANKS** COMPANY
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For more details circle **NED-849 D** on enclosed inquiry slip

Measures Nonmagnetic Coatings with ± 5% ± .0001" accuracy

NEW pocket-size THICKNESS GAUGE

ELCOMETER measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics, and other nonmagnetic coatings—quickly and accurately. Gauges flat or curved surfaces and hard-to-get-at spots easily. Needle-locking device assures correct reading every time. Available in twelve scale ranges with contact spheres, "V" block, or flat bases.

Complete with tough leather case, containing inner pocket for test strips, and carrying harness. Weighs only 6 oz.

ONLY $83.75 F.O.B. Cleveland

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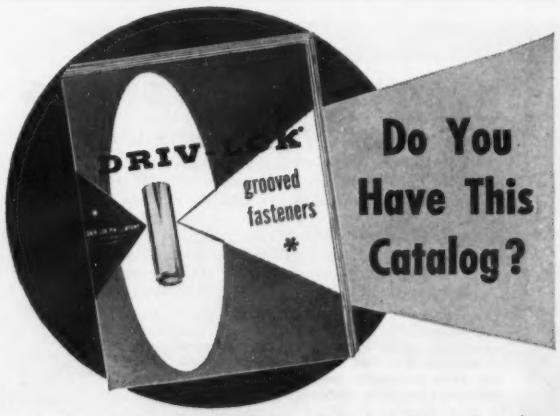
FERRO CORPORATION
4150 East 56th Street • Cleveland 5, Ohio

For more details circle **NED-850 D** on enclosed inquiry slip



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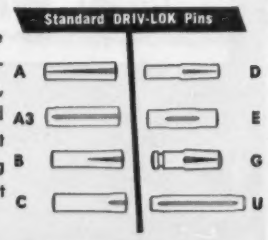
Contains Complete details on grooved pins and studs
YOURS FOR THE ASKING!

Standard DRIV-LOK Pins



Write for your copy of the DRIV-LOK catalog today. Contains factual data in concise, easy to use form. Illustrated with typical applications that may help solve a fastening problem for you. Sent without obligation, of course.

DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

For more details circle **NED-851 D** on enclosed inquiry slip

CHICAGO TRAMRAIL

JIB CRANES

Faster Handling

AT LESS COST

360° SWING

SELF-SUPPORTING

CAPACITIES FROM 1½ TO 5 TONS

A complete line of Jib Cranes including Wall Bracket Type with 180° rotation, Self-Standing Column Type with 220° rotation; also heavy duty and light duty Self-Supporting Type with 360° rotation. Mast type with top and bottom supports. Top bearing is bronze and a tapered precision bearing is at bottom.

CHICAGO TRAMRAIL CORPORATION
1310 S. Kostner Avenue • Chicago 23, Illinois

▲ For more details circle NED-852 D on enclosed inquiry slip ▲

You Asked for It!

Here it is at only

$495.00

The

NEW SUPERIOR MODEL "J2" Honing Machine

Automatic honing in production runs, tool room work and salvage operations is now within the reach of everyone.

FEATURES:
- Infinitely variable spindle speeds (225—525 rpm standard; 450—1050 rpm optional.)
- ½ HP, 110-V, 60 cy. single phase motor.
- Complete drive, motor and removable 14-gal. coolant tank enclosed in ventilated heavy steel base.
- Tray top. ★ Sealed ball bearing spindle. ★ Anti-splash screen. ★ Splash guards.

OPTIONAL:
- Dial indicator.
- Full width extension tray.
- Filter tray with 3 settling baffles and burlap filter.

There's a Superior Honing Machine for Every Honing Job

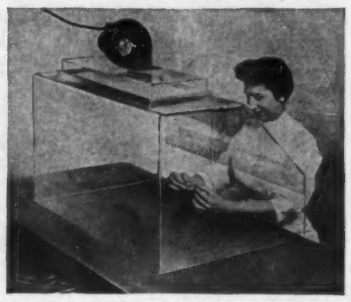
Send for literature and prices

SUPERIOR HONE CORPORATION

1613 ELRENO STREET ELKHART, INDIANA

▲ For more details circle NED-853 D on enclosed inquiry slip ▲

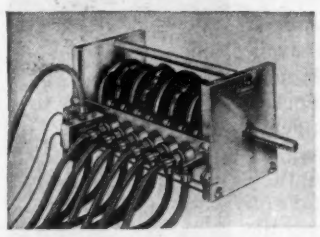
PLEXIGLAS DUST HOOD
for lab, assembly, inspection work



Rigidly constructed Microvoid dust hood, made of optically-clear ¼-in. Plexiglas, makes possible critical laboratory, manufacturing, and inspection operations under dust-free conditions. Hood work area of 34 x 24 x 19¼ in. allows unimpeded movement of arms and hands. Quiet blower at the top forces room air into the hood through a large-area filter which removes even 0.5-micron dust particles. This internal positive pressure prevents unfiltered room air from entering the open front of the hood. All edges of hood are fused and flame polished. Weighing only 35 lb, it can be easily lifted to accommodate large assemblies. • **Air-Shields, Inc.**, Industrial Div., Hatboro, Pa.

▲ For more details circle NED-854 D on enclosed inquiry slip ▲

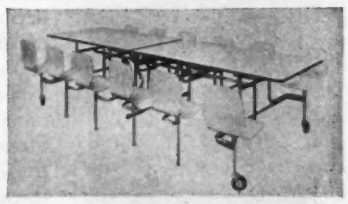
SEQUENCE PROGRAMMER
controls automatic work operations



Compact pneumatic-electrical Minimatic programming unit precisely controls air-operated automatic tooling and work operations. A choice of eight easily altered cams adapts it to most automation requirements. Special cams are also available at low cost. The ⅜-in. steel shaft can be extended out either or both ends for tandem operation. Unit can be driven by any power source supplying a minimum of 10 lb-in. of torque. Self-lubricating bearings and end plates tapped for bottom or rear mounting are among features. Over-all size is 7⅛ x 4 x 3¾ in. • **Clippard Instrument Laboratory, Inc.**, 7390-P Colerain Rd., Cincinnati 39, Ohio.

▲ For more details circle NED-855 D on enclosed inquiry slip ▲

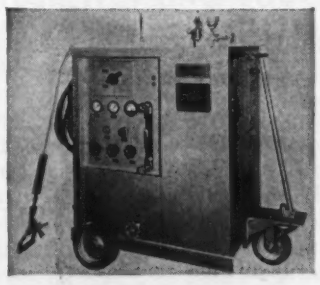
TABLE & CHAIRS COMBINATION
folds up into one portable unit



Orderly in-plant feeding is facilitated by Model TC-65 table-chairs unit which combines a table and 12 chairs into one folding portable assembly. Individually supported chairs swivel 180 degrees, enabling occupants to face away from table during meeting activities. Chairs are available in contoured plywood or molded plastic and are anchored to table by structural steel pedestals offset to one side for leg freedom. Melamine plastic-topped table measures 10 ft long by 30 in. wide. Folding of table and chairs is facilitated by torsion bar. When folded, the caster mounted unit stores in 12.1 sq ft area. • **Sico Mfg. Co.**, 5215 Eden Ave. S., Minneapolis 24, Minn.

▲ For more details circle NED-856 D on enclosed inquiry slip ▲

STEAM-JET CLEANER
provides three-fold cleaning action



Three-fold cleaning action is provided by improved Speedylectric Hydro Steam-Jet cleaner available for 220, 440, or 550 v three-phase operation. It operates with a single hose and heavy duty swivel steam gun, and can be used as a high pressure steam cleaner, with or without detergents, as a high pressure hot or cold rinse unit, or as a dry steam cleaner where excessive water is objectionable. Once switched on, unit holds full operating pressure all day and is ready for instant use. Steam jet is controlled at the gun. Detergent, adjustable to desired proportion, is fed into steam from built-in tank with agitator and heater. • **Pan-Tex Mfg. Corp.**, Speedylectric Div., Box 660, Pawtucket, R. I.

▲ For more details circle NED-857 D on enclosed inquiry slip ▲

Sutton NEW IMPROVED MOTOR DRIVEN PRESSURE BLOWER

ONE-PIECE HOUSING
SELF-CLEANING WHEEL

For EXHAUSTING Dust . . Smoke Fumes . . Vapor
COOLING
DRYING
CONVEYING Cotton . . Wool Shavings
FORGE BLASTING

3 SIZES ¼, ½, 1 H. P.

STRONG . . LIGHT CAST ALUMINUM

Even, non-pulsating air flow . . 100-800 cu. ft. per min. at ½" to 6" static pressure. Straight wall construction cuts windage . . ups efficiency. 3450 r.p.m. direct connected 60-cycle motor . . open or totally enclosed. Set discharge in 8 different positions.

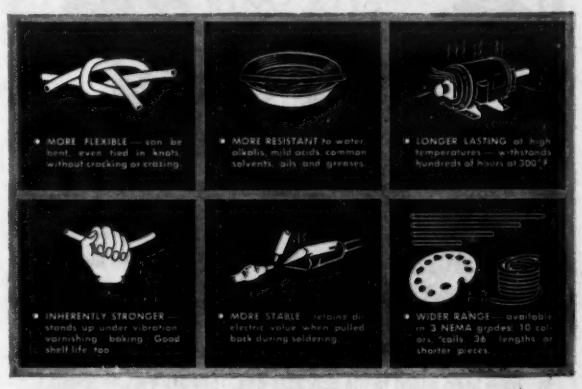
WRITE FOR DESCRIPTIVE LITERATURE

Sutton Manufacturing Corp.
112 W. WILSON AVENUE
NORFOLK, VIRGINIA

▲ For more details circle NED-858 D on enclosed inquiry slip ▲

Where can you use VARFLO?

(the highly flexible Class B Sleeving and Tubing that licks Class A in performance—equals it in price)



Cuts inventory, too! Superior to Class A insulation in performance—yet on a par with it in price—Varflo Sleeving and Tubing can be used economically for all Class A and Class B installations. This low-cost adaptability of Varflo enables many of our customers to achieve substantial savings in inventory. Available in NEMA Grades A-1 and B-1 tubing and Grade C-2 sleeving.

Perhaps Varflo can solve your insulating problems. Describe them in a letter—no cost or obligation for our recommendations. Samples available.

Varflex CORPORATION
Makers of Electrical Insulating Tubing and Sleeving

Approved for application under MIL-I-21557

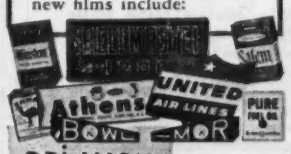
510 W. Court St., Rome, N. Y.

▲ For more details circle NED-859 D on enclosed inquiry slip ▲

ANNOUNCING . . . THE LATEST ADDITION TO OUR FAMILY OF QUALITY PRODUCTS—

MEYERCORD DRI-MARK FILMS

DRI-MARK . . . is Meyercord's newly perfected line of PRESSURE SENSITIVE signs and trade marks produced as durable Truck Signs, Window Signs, Nameplates and Product Markings. These startling new films include:



DRI-MARK DECAL
DRI-MARK VINYL
DRI-MARK MIRRO-CAL
DRI-MARK MIRRO-CAL
DRI-MARK CLEAR MYLAR
DRI-MARK OUTDOOR PAPER

These high tensile strength PRESSURE SENSITIVE films and laminates give the greatest possible latitude and flexibility to the Meyercord line of products, adaptable to all of your sign needs . . . processed with Meyercord's own exclusive PRESSURE SENSITIVE adhesive and Meyercord's in-plant Research, Art, Production and Service facilities. *Remember, when it's DRI-MARK it's Meyercord!*

with MEYERCORD COLORGARD 70

Now . . . all Meyercord DRI-MARK films are protected by COLORGARD 70... Meyercord's exclusive laboratory-developed and perfected clear top coat—the toughest, most durable coat yet produced for the Decal and transferable film industry. Thoroughly tested! Two years in actual use!

Whatever your sign needs, you owe it to yourself to investigate Meyercord's complete line of products. Our factory trained representatives will be glad to assist you in the proper selection of markings for any particular requirement. *Write today.*

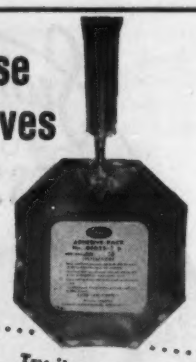
the MEYERCORD co.
Dept. E-316, 5323 West Lake Street, Chicago 44, Illinois

▲ For more details circle NED-860 D on enclosed inquiry slip ▲

Easiest Way To Use Epoxy Resin Adhesives

. . . Fenwal's new custom designed Adhesive Pack

(Pat. applied for)



Saves time — mixture is exactly proportioned to give you better bonding and strength. No time wasted in measuring.

Reduces waste — packs available with formulations and amounts *tailored* to your work requirements.

Try it yourself! Send for a sample pack today — ONLY $1.00

This handy Adhesive Pack permits you to mix resin and curing agent without exposure to air or skin. The resin is contained in a sturdy, clear, plastic Pack. The curing agent is hermetically sealed in an attached collapsible tube. Until you use the Pack, the resin and agent are kept separate; then your mixing is done within the plastic bag. Shelf life is one year.

Available in virtually all formulations and de-gassed Packs . . . custom-made to your specifications, Fenwal Adhesive Packs are quick, safe, easy, and economical. Send for your sample Pack today — only $1.00 or write for a free folder to Adhesives Pack Department, Fenwal Incorporated, 274 Pleasant St., Ashland, Massachusetts.

Fenwal Controls Temperature . . . Precisely

▲ For more details circle NED-861 D on enclosed inquiry slip ▲

STANDARD BASE available in single solenoid, 3-way; single solenoid, 4-way; double solenoid, 4-way.

SUB-BASE available in single solenoid, 4-way; double solenoid, 4-way.

25 NEW JIC SOLENOID AIR VALVES by SCHRADER

. . . meet and exceed **JIC** specs

Twenty-five new compact and rugged JIC Solenoid Air Valves have been added to the Schrader line. They are easy to install. Have roomy junction boxes for convenient electrical connections. Can be operated by hand without current in an emergency. Safe, recessed override buttons prevent accidental operation. Fifteen of these new JIC Valves are made with standard base; ten with sub-base.

Write for catalog insert with complete specifications and data on these 5 new Schrader JIC Solenoid Air Valves.

Schrader a division of SCOVILL

A. SCHRADER'S SON
Division of Scovill Manufacturing Co.
459 Vanderbilt Ave., Brooklyn 38, N. Y.

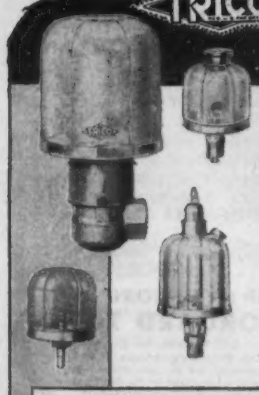
QUALITY AIR CONTROL PRODUCTS

▲ For more details circle NED-862 D on enclosed inquiry slip ▲

CUT MANPOWER MAINTENANCE and OIL COSTS . . .

Increase Production

with TRICO AUTOMATIC OILERS



Why tolerate costly waste that can be reduced to a minimum? TRICO Oilers eliminate daily "trust-to-luck" hand oiling because one filling of the reservoir lasts a long time. Also, production can be increased, machine life prolonged, costly down-time eliminated. Yes, all these benefits and more for a small investment in TRICO Oilers.

SEND FOR FREE CATALOG

TRICO FUSE PULLERS

Speed up fuse replacement. Eliminate dangers of shock, burns, infection and compensation costs. Also handy for adjusting switch and fuse clips.

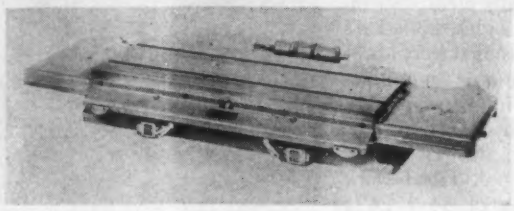
WRITE FOR BULLETIN NO. 5

TRICO FUSE MFG. CO. · MILWAUKEE 12, WIS.

▲ For more details circle NED-863 D on enclosed inquiry slip ▲

INDEXING SLIDE TABLE
adjusts for 1 to 15-in. stroke

Powered by air or hydraulic cylinder, this two-position indexing slide table provides working and loading-unloading stations, or two work positions for various



metalworking operations on machine tools. Slide movement is powered by 3-in. bore air cylinder or 2-in. bore hydraulic cylinder, and stroke length adjusts infinitely from 1 to 15 in. Top slide member measures 30 x 12 in. and has two 5/8-in. bolt T-slots spaced 6 in. apart. Almost any type of slide cycle control can be obtained with the optional valve and electrical combinations. • **Russell T. Gilman, Inc.**, 623 Beech St., Grafton, Wis.

▲ For more details circle NED-864 D on enclosed inquiry slip ▲

NYLON COVERALLS
boots are integral

Lint-free nylon pack cloth is used in these coveralls, available either with plastic buttons or zipper front closing. Pocketless garments have attached boots formed by continuing the back panel of the leg until it meets the sole of the boot. Front leg panel is shaped to form the front of the foot. Sole is made from three thicknesses of the nylon material. Garments can also be made with attached gloves. • **M. Setlow & Son, Inc.**, 131 Chestnut St., New Haven, Conn.

▲ For more details circle NED-865 D on enclosed inquiry slip ▲

VOLTMETER
has motor-driven range selector

Printed circuitry facilitates assembly of the Knight-Kit AC voltmeter kit which has a motor-driven automatic range selector. Instrument is automatically set on the proper range the instant the probe is touched to the circuit. Panel lights indicate the range in use. Built-in range selector switch is driven through all 11 ranges from 0.003 to 300 v in 2½ sec. Decibel range is −62 to 52. Preassembled motor and gearbox have nylon gears. Seeking mechanism can be stopped and locked on any desired range. Response is ±1 db from 20 cps to 2.5 mc and flat from 50 cps to 500 kc. Connection of the amplifier to a scope permits waveform observation while making measurements. Ten-tube kit is supplied with all parts, probe, wire, solder, and a 10¼ x 6⅝ x 10¼-in. case. • **Allied Radio Corp.**, 100 N. Western Ave., Chicago 80, Ill.

▲ For more details circle NED-866 D on enclosed inquiry slip ▲

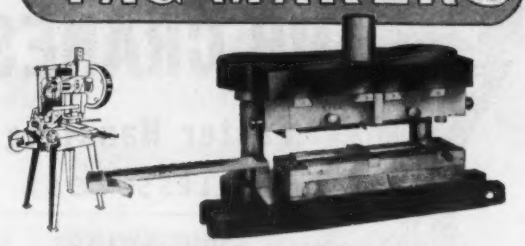
CHEMICAL HAND PUMP
empties carboys, drums, and tanks

Safe, easy method of pumping virtually any liquid or slurry from carboys, drums, and tanks is provided by this hand operated 1 13/16-in. OD pump made from Nalgene Type H polyethylene. Small drip well at top of pump barrel prevents liquid from running down side and touching operator's hands. Friction-fit spout can be turned up to eliminate dripping or removed for shipping or storage. Pump is inserted 34 in. into a container to deliver 1 gal of liquid in six strokes. It is priced at $15. • **Nalge Co.**, Box 365, Rochester 2, N. Y.

▲ For more details circle NED-867 D on enclosed inquiry slip ▲

GTS STAMPED OR EMBOSSED

•TAG MAKERS



MAKES COMPLETE (MARKED) TAG EACH PRESS STROKE

1. MARKS
2. PIERCES
3. SHEARS STRIP STOCK

COMPLETE DETAILS SENT TO YOU UPON REQUEST

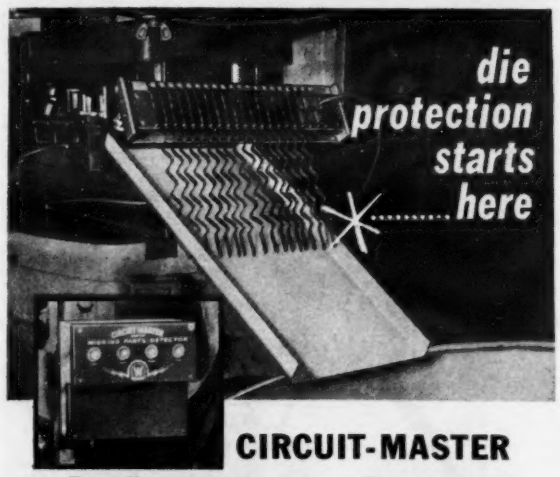
GTS Stamped or Embossed Tag Makers are built to your tag requirements, with these features: Quick-setting, interchangeable steel type . . . simply dropped into recesses of drawer style chase. Any character size you want. Built to run any amount, whenever needed. GTS design and quality, experience proved.

Phone: EAstgate 7-0300

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine, Chicago 13, Ill.

IF IT'S WORTH MAKING, IT'S WORTH MARKING

▲ For more details circle NED-868 D on enclosed inquiry slip ▲



CIRCUIT-MASTER

missing parts detector

detects: non-ejection • mis-feed • buckling • end-of-material

Priced as low as $276.75 complete!

AT THE ASTE BOOTH 844

Protect all your dies from damaging overloads for less than the replacement cost of one. Circuit-Master's patented electronic circuits automatically stop your machines BEFORE an unejected part can cause a die-damaging overload. Simple to install, no changes to equipment or wiring required—Circuit-Master is completely automatic, no adjustments of any kind.

Write, wire, phone now for detailed bulletin NED-460.

WINTRISS, INC.

Originators and Manufacturers of Circuit-Master Overload Detector, Autotransfer, Automat, Automold and Missing Parts Detector.

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Representatives: A few territories open on an exclusive, protected basis.

▲ For more details circle NED-869 D on enclosed inquiry slip ▲

PRODUCT IMPROVEMENT IDEAS

for special machinery builders

New 8-page booklet tells how to control power drives automatically with Warner's new Electro-Sheave . . . the pre-engineered clutch-pulley combination that mounts in minutes to standard NEMA motor shafts. Diagrams, cutaways, and drawings show how electromagnetic principle increases machine versatility, speeds cycling, and improves control. Selection tables list complete dimensions and capacities. Simple charts help you choose correct Electro-Sheave for each application. Send for your free copy today! Ask for Brochure P-52.

WARNER

Warner Electric Brake & Clutch Co.
Beloit, Wisconsin

▲ For more details circle NED-870 D on enclosed inquiry slip ▲

DIXON HOSE FITTINGS
for Every Industrial Hose Service
IN SPECIAL METALS

In case you did not know it, nearly all products in the DIXON QUALITY LINE are readily available in Special Metals to meet the widest variety of anti-corrosion, anti-abrasion requirements—

STAINLESS STEEL • ALUMINUM
MONEL METAL • SPECIAL ALLOYS

If you need Couplings, Nipples, Menders, Clamps, Valves and other fittings for hose handling chemicals, oils, gases, sand, grout or other corrosive or abrasive materials, specify Dixon—for dependability.

From Your Hose Supplier or Industrial Distributor

DIXON *Valve & Coupling Co.*
GENERAL OFFICES & FACTORY—PHILADELPHIA 22, PA. BRANCHES—CHICAGO BIRMINGHAM • LOS ANGELES • HOUSTON • DIXON VALVE & COUPLING CO., LTD., TORONTO
ASSOCIATE COMPANIES—BUCK IRON COMPANY, INC., QUARRYVILLE, PA. • PRECISION DRAWN STEEL COMPANY, CAMDEN, N.J.

▲ For more details circle **NED-871 D** on enclosed inquiry slip ▲

Aren't You Entitled to the Best?

If you were a doctor, you wouldn't use a cheap stethoscope. If you were a violinist, you wouldn't think of playing a concert on a scratchy fiddle.

As a man of standing in your profession—you, too, are entitled to the best. It doesn't make sense to settle for a cheap lead holder, the most important, the most used tool in your profession, whether you are an engineer, designer, draftsman or architect.

A.W.Faber Locktite 9800 is not a luxury. It is a necessity. It is the ultimate means by which you translate your creative skills. It is the bedrock of your ability, the criterion of your worth—the direct influence of your livelihood—and the index of your future success. In the light of these values, can you afford to use a less-than-best lead holder?

Only Locktite 9800 has all of these exclusive advantages:
- **Long tapered spiral metal grip that reduces finger fatigue.**
- **Gun-rifled clutch that grips the lead like a bulldog.**
- **TEL-A-GRADE indicator which instantly shows degree of lead in use.**

Plus perfect balance and featherweight lightness.

Try Locktite, buy Locktite 9800 today, the top quality lead holder backed by two centuries of experience.

FULLY GUARANTEED!
If it ever happens, that any part of a LOCKTITE Holder breaks in normal usage, the entire holder will be replaced free of charge.

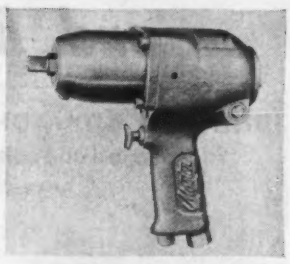
#9030 Imported CASTELL Black Gold Refill Leads fit any standard holder. Perfectly mated with LOCKTITE. Sold by all good Dealers.

A.W.Faber-Castell Pencil Co., Inc., Newark 3, N. J.

A.W. FABER CASTELL DRAWING

▲ For more details circle **NED-872 D** on enclosed inquiry slip ▲

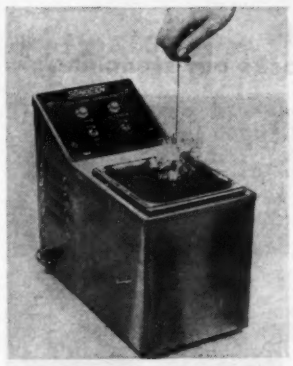
IMPACT WRENCH
in 1/2, 5/8, and 7/16-in. shank sizes



This air-powered impact wrench with only two impacting parts facilitates fast, precision assembly work in automotive, aircraft, and other industries by virtue of its 7100-rpm run down speed. It weighs only 5¾ lb, has a ⅜-in. bolt capacity, and is controlled with light finger pressure. A protected reverse valve prevents accidental direction change. Wrench is furnished in ½, ⅝, and 7/16-in. bearing supported drive shank sizes. For areas where air line lubrication is not available, a large oil reservoir in the handle with an oil metering unit provides motor lubrication. • **Master Power Corp.**, Krick Road, Bedford, Ohio.

▲ For more details circle **NED-873 D** on enclosed inquiry slip ▲

ULTRASONIC CLEANER
transistorized type for small parts

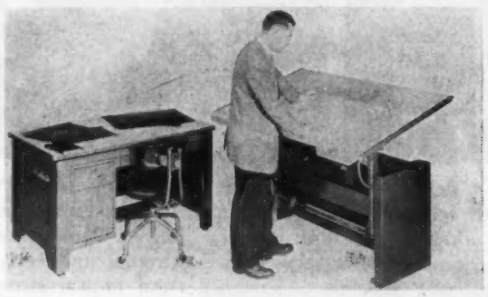


Precision parts, electronic components, investment castings, bearings, small subassemblies, and dies, are cleaned of various soils by the Model LGT-40 ultrasonic cleaner. Designed for a minimum of maintenance, its only generator control is an on-off switch. A second switch controls the optional integral heating elements which keep the cleaning solution at the proper temperature. Both the 14 x 7 x 13-in. housing and the ½-gal removable tank are Type 300 stainless steel. Generator output is 40 w average and 80 w on peaks. Power input is 115 v, 50/60 cycle ac. • **Branson Ultrasonic Corp.**, 40 Brown House Rd., Stamford, Conn.

▲ For more details circle **NED-874 D** on enclosed inquiry slip ▲

DRAFTING TABLE
all adjustments made from front

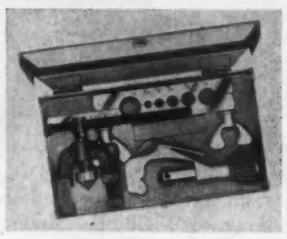
Flat drawing surface of the Desk-O-Matic drafting table is adjustable from desk height of 29 in. to drafting table height of 38 in. Both height and top tilt



adjustment from horizontal to 90 degrees vertical are counterbalanced and are made from the front of the table. Available top sizes are 37½ x 54 in. and 37½ x 60 in. Base measures 19⅝ x 48 in. Basswood top has a steel edge. • **Mayline Co.**, 619 N. Commerce St., Sheboygan, Wis.

▲ For more details circle **NED-875 D** on enclosed inquiry slip ▲

TUBE WORKING TOOLS
for 1/8 to 4 1/8-in. tube sizes



Added to line of hand and power pipe tools is a full line of copper and brass tubing tools which includes cutters, flaring and swaging tools, reamers, and benders. Four cutters for hard or soft copper, brass or aluminum, block tin, and lead tubing and six flaring tools are for ⅛ to 4⅛-in. tubing. Combination flaring and swaging tool, with four swage adapters, is offered with a regular swaging tool in a metal case. Seven lever-type benders and five spring benders for tube size ranges from ¼ through ⅞ in. and ¼ through ⅝ in., respectively, are also offered, as is an inner and outer reamer. • **Toledo Pipe Threading Machine Co.**, Box 1678, Toledo 3, Ohio.

▲ For more details circle **NED-876 D** on enclosed inquiry slip ▲

SEE THE COMPLETE LINE!

HILD
TRANSFERABLE HEAD
VACUUM CLEANERS

FOR USE ON YOUR OWN 55 GALLON DRUM

WRITE FOR INFORMATION
HILD FLOOR MACHINE CO. INC. NED-69
1217 W. Washington Blvd., Chicago 7

Manufacturers of Floor Machines and Industrial Vacuum Cleaners Since 1927

▲ For more details circle **NED-877 D** on enclosed inquiry slip ▲

UNIVERSAL
SELECT "O" RING KITS

Fills Replacement Needs on 85% of All Industrial Equipment

★ 180 "O" Rings in Each Kit — Sizes 1 to 25.
★ Patented Plastic Case Shows You "O" Ring Sizes in Kit at a Glaoce!
★ Interchange Data of All Leading "O" Ring Producers in Each Kit — All Manufacturers' Numbers Converted to Universal Numbers.
★ Buy Replacement Back-up Washers in these "O" Ring Sizes.

TEFLON	$115.95
BUTYL RUBBER	$ 47.95
STANDARD COMMERCIAL (Buna N)	$ 24.50
STANDARD SILICONE RUBBER	$ 66.90
VIM LEATHER BACK-UP WASHERS	$ 28.75
SELECT-O-RING KITS IN VITON	$124.50
AN 6227 SERIES	$ 59.50

RETAINING RING
ECON-O-KIT

400 Truarc Cadmium Plated Rings
—84 Sizes—70% of Ring Sizes Used in Industry

Save—eliminate many purchase orders for small quantities of retaining rings — Get most sizes used on your equipment with only ONE order — in one shockproof, plastic case. Sizes from ¼ to 2½ inches in the three most used Truarc series of internal, external and universal crescent ring designs. All rings meet National Aircraft Standards NAS 669 and NAS 670. Low priced at $34.50 per kit.

Installation and removal tools also available.

Packaged Merchandise Co.
3067 W. 117th St. • Cleveland 11, Ohio

▲ For more details circle **NED-878 D** on enclosed inquiry slip ▲

STEAM LINES

AEROQUIP *Flexible Hose of Teflon and Reusable "super gem" Fittings**

Even under 200 psi (388°F.) steam and constant flexing, users report long life for Aeroquip Hose of Teflon and "*super gem*" Reusable Fittings*—chemically inert, excellent lubricity, ideal for chemicals, hot air, oils and solvents, too. Get bulletin IEB-50—or see "Yellow Pages" under "Hose" for your Aeroquip Distributor.

*U.S. Patent Nos. 2,833,567 and 2,731,279
"*super gem*" is an Aeroquip Trademark
Teflon is DuPont's trade name for its tetrafluoroethylene resin

STANDARDIZE ON Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN
INDUSTRIAL DIV., VAN WERT, OHIO • WESTERN DIV., BURBANK, CAL.
AEROQUIP (CANADA) LTD., TORONTO 19, ONTARIO

▲ For more details circle NED-879 D on enclosed inquiry slip ▲

BARRETT
MODEL J-R
SINGLE-STROKE
LIFT-TRUCK

BARRETT Model J-R is the lowest priced work horse of ALL lift-trucks. Built for rough, hard handling jobs 2500- to 4000-lb. capacity loads from 30" to 72" long. Lift 1⅝" to 2⅝" standard. ONE STROKE raises skid—step on release treadle and hydraulic check lowers load gently.

Barrett Model J-R fits any type skid—just run truck under skid. One handle stroke lifts.

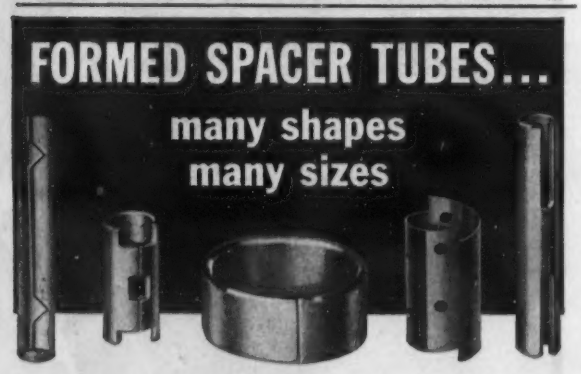
WRITE FOR LOW PRICES AND BULLETIN 555-1

BARRETT-CRAVENS COMPANY
650 Dundee Road, Northbrook, Illinois
Representatives in All Principal Cities

BARRETT
ONE MAN DOES MORE THAN 3 OR 4...WITH A BARRETT

▲ For more details circle NED-880 D on enclosed inquiry slip ▲

FORMED SPACER TUBES...
many shapes
many sizes



...at a saving over pipe and tubing!

Made from any formable metal—mild steel, copper, brass, bronze, aluminum, stainless steel.

Plating or finishing of any standard type—copper, zinc, nickel, cadmium, Parkerizing, Dulite.

Available in special shapes, tapers, seams, locks, and with ball indents for oil pockets . . . can be supplied copper-brazed to other components, and with copper-brazed seams. For free catalog, write to Federal-Mogul Division, 11079 Shoemaker, Detroit 13, Mich.

FEDERAL Mogul

FEDERAL-MOGUL DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.

▲ For more details circle NED-881 D on enclosed inquiry slip ▲

New Processes and Materials

JUNCTION BOX ADHESIVE
for use on masonry, metal, or wood

Single cup of PA--041 Junction Box Mount will mount up to ten 4 x 4-in. boxes. The two-part epoxy resin adhesive bonds them to masonry walls, ceilings, and floors, and to metal beams and wood surfaces. It is packaged in a separator type cup which is the mixing container. Adhesive is water and weatherproof, resistant to acids and alkalies, nontoxic, and nondermatitic. When fully cured in about 3 hr, bond strength exceeds that of the masonry wall. • Permacel, New Brunswick, N. J.

▲ For more details circle NED-882 D on enclosed inquiry slip ▲

OBLITERATING FLUID
in spray can, blocks out stenciling

Very opaque, tan colored obliterating fluid in a self-spraying can effectively covers over and blocks out old stenciling, penciled or painted markings, and labels. It transforms used cartons and crates into clean, fresh looking containers for re-use and re-stenciling. Fluid is non-clogging and waterproof. • Reynolds Ink, Inc., 4502 Euclid Ave., Cleveland 3, Ohio.

▲ For more details circle NED-883 D on enclosed inquiry slip ▲

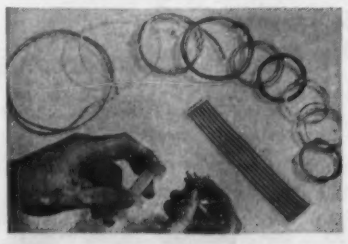
RUBBER SUCTION HOSE
reinforced with polyethylene spiral

Virtually kinkproof rubber suction hose is usable in industrial applications where dust and gas tend to create an explosive situation. Continuous spiral of Grex

high density polyethylene is used for reinforcement. Both core and coil are wrapped with an outside layer of abrasion resistant rubber. Polyethylene spiral is sparkproof, resists temperature extremes and corrosive chemicals, and has high tensile and impact strength. Sizes up to 3 in. are offered with rubber or synthetic tube. • Goodall Rubber Co., Whitehead Road, Trenton 4, N. J.

▲ For more details circle NED-884 D on enclosed inquiry slip ▲

FEP-FLUOROCARBON RESIN
plastic for extrusion or molding



Virtually immune to chemical attack, Teflon 100, a new plastic, has good electrical insulating, antistick, and frictional characteristics, and will not absorb moisture. It is an FEP - fluorocarbon resin rated for continuous service up to 400° F and down to −450° F. Material can be extruded or molded in thermoplastic processing equipment. It also has high toughness and strength, good weatherability, and good transparency in thicknesses up to 10 mils, higher than for TFE resin. Uses include coaxial and multi-conductor cable, wiring, molded electronic components, laboratory tubing, and chemical equipment linings. Teflon 100 film is also available. • E. I. du Pont de Nemours & Co., Polychemicals Dept., 1007 Market St., Wilmington 98, Del.

▲ For more details circle NED-885 D on enclosed inquiry slip ▲

CHOOSE HOWARD'S "UNI-SEAL"
fractional H.P. Unit Bearing Motor
for fan applications

5 YEAR GUARANTEE
Needs no oiling

Available with Open or Closed Construction

MOUNTING: From rear or by special pads on front.
BEARING: Single, long-life, permanently lubricated.
STATOR: Vacuum varnish impregnated coil on molded nylon bobbin.
ROTOR: Dynamically balanced for ultra-quiet operation.
ROTATION: Unidirectional (CW or CCW as specified).
SHAFT-HUB: Assures positive and accurate location of connecting part (fan) which must run concentric. Can also be furnished with shaft extension from hub.

HP: 1/750 to 1/185
NO LOAD RPM: 3400
FULL LOAD RPM:* 2600-3200
INPUT WATTS: 8-30
VOLTS: 115 V. 60 cy. AC std.
*Lower full load speeds also available.

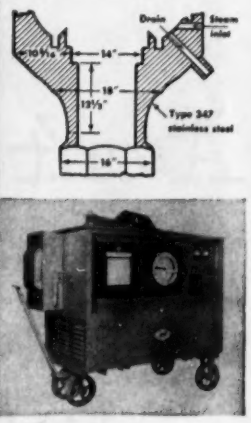
Send us your specifications or write for complete catalog.

POWERED BY HOWARD

HOWARD INDUSTRIES, INC.
1740 State St., Racine, Wisconsin
Divisions: Electric Motor Corp., Cyclohm Motor Corp., Loyd Scruggs Co.

▲ For more details circle NED-886 D on enclosed inquiry slip ▲

Profit through E.A.I. Research



Uniform, through-and-through heating of the thickest sections of the big stainless steel valves was provided by the Smith-Dolan method, with precision control of temperatures (2-hour dwell at 1900°F.). Drawing shows cross-sectional dimensions.

Standard Smith-Dolan units come equipped with eye hooks and wheels for easy portability, and with instrumentation for recording permanent charts of the heat run.

SMITH-DOLAN
On-the-Job HEAT TREATMENT
Solution to Weld Embrittlement Problem at Consolidated Edison

Public utilities are among the largest users of the Smith-Dolan System of Low-Frequency Induction Heating. They want to keep their service uninterrupted, their costs low, and they find that this portable system simplifies the problem of pre-heating and post-annealing in producing sound welds, and in making dependable repairs.

A typical application of the system by a public utility was described in a recent article in Welding Design & Fabrication.* At Consolidated Edison's No. 10 Turbine Generating Station in New York City, two large steam pressure valves made of Type 347 stainless had to be repaired because of weld embrittlement. Removal to the shop for heat treatment would have proved costly and time taking. With the Smith-Dolan portable units, the work was completed on the job within 12 hours.

Learn about the savings and other benefits your company can obtain from the Smith-Dolan System. It is today's most versatile heat treating method, simplifies and upgrades work quality in numerous applications. Write for brochure, "Smith-Dolan System of Low-Frequency Induction Heating."

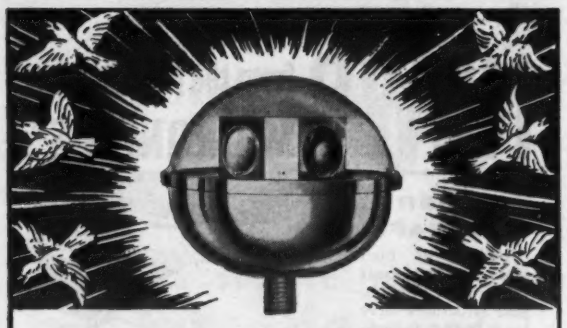
*Reprints available without charge

Rental Against Purchase—Get first-hand proof in your own plant without capital investment.

DEMAND THE BRAND MADE BY PEOPLE WHO BUY YOUR PRODUCTS

Electric Arc, inc.
152-6 Jolliff Ave.
Newark 8, New Jersey
ELECTRIC-ARC

▲ For more details circle NED-887 D on enclosed inquiry slip ▲



It's for the BIRDS!

STOP COSTLY WAREHOUSE DAMAGE . . .
Flash the MARK VIII Bird Eliminator

Now, bird damage so expensive to packaged goods, sheet steel, machinery, grain and other merchandise stocked inside warehouses can be eliminated! This light covers 360° like an airplane beacon with dual colored beams at the rate of 200 a minute. The roving rays continuously disturb the birds, interrupting their feeding and nesting to the extent that they do not remain. Lifetime vitreous enameled housing can't corrode. Operates on 115-120 V, is easily installed and has a 2000-hour bulb.

Get the Facts—Write TODAY!

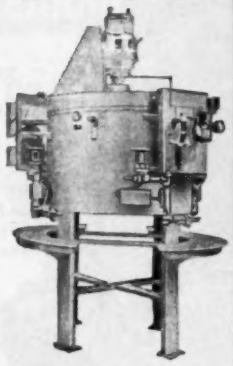
TRIPPE MANUFACTURING CO.
133 N. Jefferson, Dept. F-3, Chicago 6, Ill.

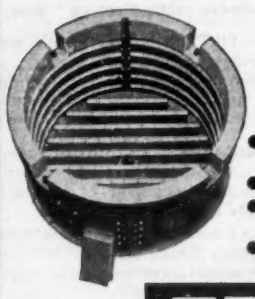
▲ For more details circle NED-888 D on enclosed inquiry slip ▲

KETTLES AND JACKETS

Faster Heating and Cooling . . . Longer Life

- 5 Gallon to 325 Gallon Capacity Kettles for Waxes, Oils, Resins, Salts, Asphalts.
- TRENT "Folded-and-Formed" Heating Elements in Metal Inner Liner.
- Complete Temperature Control to Prevent Overheating, Scorching, Hot Spotting.
- Jackets for Retorts, Reactors and Autoclaves.





- High Temperature Uniformity to 2000°F.
- Compact, Space Saving Design.
- Low Thermal Inertia—High Dielectrical Strength (600V).
- Economical Installation and Maintenance.

WRITE FOR BULLETIN 72-TE

TRENT INC.
Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILADELPHIA 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

▲ For more details circle NED-889 D on enclosed inquiry slip ▲

New Processes & Materials

FLOOR COVERING
long-wearing type in rolls, blocks

Random scattered vinyl chips incorporated in Deco Tread Mastipave floor covering serve as decoration and also hide trackage, scuffs, and scratches. The tough, long-wearing product is offered in terra cotta with sandalwood and beige chips, and in black with gray and green chips. One by thirty-yard rolls and 9 x 9-in. blocks are available at $1.30 per square yard. Undecorated Mastipave and Grip Tread Mastipave for slippery floor areas are still available. • **Fibreboard Paper Products Corp.**, Pabco Industrial Insulations Div., 475 Brannan St., San Francisco 19, Calif.

▲ For more details circle NED-891 D on enclosed inquiry slip ▲

STAINLESS SHIM STOCK
nine thicknesses in 60-ft coils

Inventory of Roblinger P.M.C. stainless steel shim stock is automatically maintained, since ½ and 1-in. calibrations over its entire 60-ft coil length show the amount remaining. Packaged in a self-dispensing box, it is used for shimming jigs, tools, fixtures, machinery, washers, stampings, and electronic parts. Nine standard thicknesses from 0.002 to 0.010 in. are offered in the Type 302 rolled full hard, spring temper stainless steel. • **N. E. Slavin & Co.**, 40 E. Cross St., Somerville, Mass.

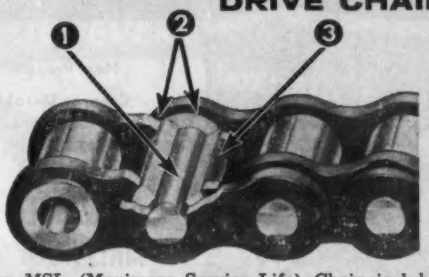
▲ For more details circle NED-892 D on enclosed inquiry slip ▲

ALUMINUM ROOF COATING
reduces below-roof temperatures

Alcoa aluminum pigment in Revco Liquid Aluminum Coating for industrial roofs forms a shield that deflects the sun's rays and reflects back 71 per cent of its heat. Tests show that below-roof temperatures are reduced up to 20° F. Application is with a long handled brush. • **Revere Chemical Corp.**, University Center Station, Cleveland 6, Ohio.

▲ For more details circle NED-893 D on enclosed inquiry slip ▲

are you getting this 3-POINT PROTECTION on your DRIVE CHAIN?



Whitney MSL (Maximum Service Life) Chain is *lubricated for life* by oil-impregnated sintered steel bushings. With this development, Whitney solves a basic chain problem—*more damage is caused by faulty chain lubrication than by years of normal service.*

Pressure and heat cause built-in lubricant to expand and flow from bushings, providing a constant supply of oil to the 3 critical working areas of the chain:

1. Pin, where protective film of oil completely lubricates live bearing area between pin and bushing.
2. Plates, where bushings extend beyond surface of inside plate to act as lubricated thrust bearing.
3. Sprocket engagement, where oil film on exterior surface of MSL Sintered Bushing provides constant lubrication between sprocket teeth and chain. Tough oil film provides smooth sprocket engagement, cushions impact and reduces drive wear.

Whitney MSL chain conforms to ASA Standards and is completely interchangeable with only similar pitch ASA Standard chain. Carried in stock for immediate delivery by Whitney Distributors. *Write for catalog.*

THE WHITNEY CHAIN COMPANY
a subsidiary of FOOTE BROS. GEAR AND MACHINE CORPORATION
4569 S. Western Blvd., Chicago 9, Ill.

POWER TRANSMISSION DRIVES

▲ For more details circle NED-894 D on enclosed inquiry slip ▲

KRW SHOP PRESSES

DO ALL THESE JOBS AND HUNDREDS MORE

A "DO-EVERYTHING" MACHINE: This KRW 25-ton Hand-Operated Hydraulic Press will do a multitude of jobs that need a "squeeze" . . . *quickly, accurately and profitably.* In many cases, dies can be readily improvised from scrap steel. Changing from one setup to another usually takes only a minute or two.

EASY TO OPERATE. The capstan hand wheel brings the ram rapidly down to the work. With the pump handle positioned at a convenient working height, it's easy to keep an eye on the pressure gage as well as the work.

PRESS WITHIN A PRESS. By using the capstan hand wheel to apply ram pressure, you also can operate this 25-ton hydraulic press as a 3-ton mechanical press. *It's a KRW exclusive!*

MAIL THIS COUPON for complete details on KRW Hand-Operated and Motor-Driven Shop Presses (Capacities: 25 thru 150 tons).

K. R. WILSON, INC.
1228 MAIN ST., ARCADE, N. Y.
SEND your Hand-Operated and Motor-Driven Shop Press Bulletins to us, without obligation.

NAME ..... TITLE .....
COMPANY .....
STREET .....
CITY ..... ZONE ..... STATE .....

▲ For more details circle NED-895 D on enclosed inquiry slip ▲

PRECISION PRODUCTION PROBLEMS?

Here's help from Bausch & Lomb
TOOL DESIGN
INSPECTION
in FABRICATION
MEASURING
TESTING

TOOLMAKERS' MEASURING MICROSCOPE
Quickly measures transparent or opaque objects of any contour. Linear, accurate to 0.0001"; angular, to 1 minute of arc.

NEW SCRATCH-DEPTH GAGE
With this simple hand-held instrument you can measure the depth of any scratch to 0.0001"; with a range of 0" to 0.015".

NEW UNIVERSAL STAGING FIXTURE
Positions small parts for critical measurement with B&L Bench Comparator and Toolmakers' Microscope. Auxiliary base, with 7" travel, increases range beyond that of measuring stage.

STEREOZOOM* MICROSCOPES
Magnified 3-D views of tiny parts. Dustproof, shockproof, can be mounted right in machine or fixture. Speeds assembly, inspection. Most complete line, widest field of view.

BENCH COMPARATOR
Exclusive understage illumination—no complex set-ups, no holding fixtures for most work. Magnified silhouettes, show errors instantly. Reads to 0.0001" with optional micrometer stage.

OPTICAL AIDS CATALOG
Time-and-money-saving data on Surface Comparators, Industrial Magnifiers, Macroscopes, Micrometer Discs, Brinell Microscopes, Microscope Bodies, Wide Field Tubes, Shop Microscopes.

BAUSCH & LOMB
SINCE 1853

*TRADEMARK, BAUSCH & LOMB OPTICAL CO.

MAIL COUPON TODAY FOR VALUABLE DATA

BAUSCH & LOMB OPTICAL CO.
72704 Bausch St., Rochester 2, N. Y.
Please send literature on optical production aids checked below:
☐ Toolmakers' Microscope ☐ Scratch-Depth Gage ☐ Bench Comparator ☐ Optical Aids Catalog ☐ StereoZoom* Microscopes ☐ Universal Staging Fixture.

NAME .....
TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

▲ For more details circle NED-890 D on enclosed inquiry slip ▲

BEACON'S

New Process*
Creates Durable Fibreboard Tote Boxes That Are

- AMAZINGLY RIGID
- FIREPROOF
- TARNISH PROOF
- LIGHTWEIGHT
- ECONOMICAL
- SPACE SAVING

Nesting & Shelf Styles Also Available

Write For Free Sample

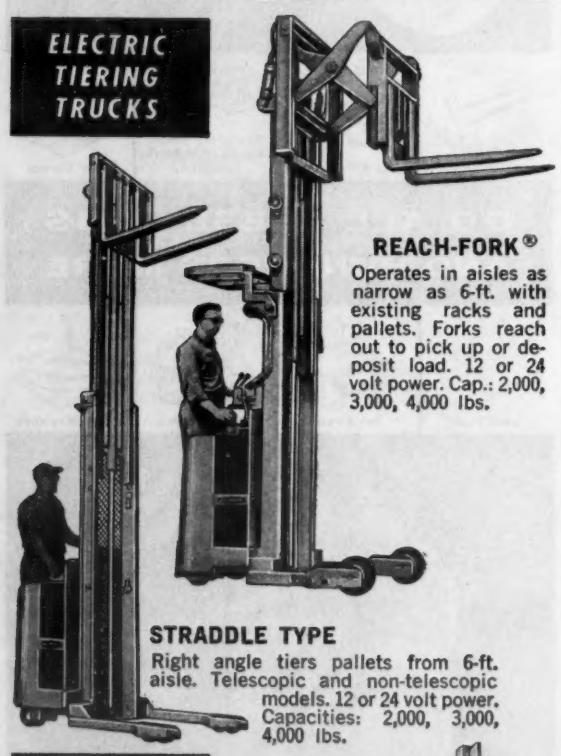
*Patented

BEACON BOXES, INC.
P. O. Box 483N
Massillon, Ohio

For more details circle NED-898 D on enclosed inquiry slip

These RAYMOND Trucks Make NARROW aisles possible!

ELECTRIC TIERING TRUCKS



REACH-FORK®
Operates in aisles as narrow as 6-ft. with existing racks and pallets. Forks reach out to pick up or deposit load. 12 or 24 volt power. Cap.: 2,000, 3,000, 4,000 lbs.

STRADDLE TYPE
Right angle tiers pallets from 6-ft. aisle. Telescopic and non-telescopic models. 12 or 24 volt power. Capacities: 2,000, 3,000, 4,000 lbs.

ELECTRIC WALKIES

STACKER
Tiers 2,000 lb. pallet load 10 feet high from 6½ foot aisle. 24 volt power. Three speeds forward or reverse. Low price includes batteries and charger.

LOW LIFT
24 VOLT POWER. Three speeds forward or reverse. Only 20½" longer than load! Low price includes batteries and charger. Capacity: 4,000 lbs.

The RAYMOND CORPORATION
4106 Madison St., Greene, N.Y.
Please send FREE bulletins:
{ } Reach-Fork { } Straddle
{ } Walkie Low-Lift { } Walkie Stacker

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-899 D on enclosed inquiry slip

New Literature and Catalogs

Locks for Switches

Chicago Lock Co.—Specifications of extensive line of Ace switch locks are contained in 6-page illustrated Bulletin UB501. Locks have up to 20 tumblers and their keys can be removed in off, on, or off and on positions. Various contact arrangements are offered. Mounting data and contact ratings are given.

For more details circle NED-900 D on enclosed inquiry slip

Industrial Safety Gratings

Bustin Steel Products Co.—Six types of safety grating for various safety needs are described in illustrated "Safety Handbook" No. 60. Besides gratings, stair treads, safety edgings, and step bars are covered. Illustrations aid designers in adapting gratings for special purposes.

For more details circle NED-901 D on enclosed inquiry slip

Plug, Ring, Thread & Plain Gages

Beloit Tool Corp.—24-page catalog presents information on standard and special plug and ring gages, and on thread and plain gages. Tap recommendation charts are included for classes of threads and standard screw threads.

For more details circle NED-902 D on enclosed inquiry slip

Maintaining Rolling Doors

R. C. Mahon Co.—Actually a 16-page maintenance and parts manual, illustrated bulletin includes section on typical rolling door construction. Guidance is offered on inspection periods, door adjustments, and continuing maintenance procedures. Door components as well as mechanical and power operators are described.

For more details circle NED-903 D on enclosed inquiry slip

Hydraulic Fittings

L & L Mfg. Co.—Fluid power accessories engineered for industrial hydraulic power systems are detailed in 64-page Catalog 60. Engineering data are given on JIC flared tube fittings, pipe and hose fittings, shut-off and control valves, and miscellaneous hydraulic line accessories.

For more details circle NED-904 D on enclosed inquiry slip

Designing for Furnace Brazing

George Getz Corp., Fabriform Metal Products Div.—"Design for Controlled Atmosphere Copper Furnace Brazing" is a 24-page illustrated handbook for designers, engineers, and manufacturers. Latest technical information on copper furnace brazing is included. Inspection methods and "do's and don'ts" are given.

For more details circle NED-905 D on enclosed inquiry slip

Vacuum Melted Alloys

Allvac Metals Co.—High temperature, corrosion resistant, special ferritic, nucleonic, and electronic alloys and Alnico magnets produced by this company are described in 8-page bulletin. Alloys are produced by induction vacuum melting in ingot, billet, bar, plate, and strip form.

For more details circle NED-906 D on enclosed inquiry slip

Carton Stitchers

Ideal Stitcher Co.—Staples with crowns up to 1⅝ in. wide are made from roll wire by the carton stitchers described in illustrated bulletin. These large staples minimize the time required for carton closure. A 25-lb coil of wire makes 12,500 staples.

For more details circle NED-907 D on enclosed inquiry slip

Machine Vises & Tables

Chicago Tool & Engineering Co.—Specifications of over 70 Palmgren items are given in 20-page illustrated Catalog P100. Included are drill press, angle, milling machine, production, and air vises; adjustable angle plates; cross slide milling, rotary, and indexing tables; and lathe milling attachments.

For more details circle NED-908 D on enclosed inquiry slip

Data Collecting System

Friden, Inc.—Collectadata data collecting system which automatically channels information from numerous work stations to a central processing point is subject of 20-page illustrated Bulletin SP-8665. Transmitters and receiver are described and applications of the system are covered.

For more details circle NED-909 D on enclosed inquiry slip

NEWS from the NRC Vacuum MICRONICLE*

SAFER AIRCRAFT

Failure of high tensile steel aircraft parts such as landing gear structures have been traced to embrittlement from hydrogen picked up during electroplating. Such parts are now finished with a new vacuum cadmium coating process which provides protection against corrosion without causing embrittlement.

Thinner films of other metals are being vacuum deposited to develop improved semi-conductor and micro-molecular circuits and to produce low cost decorative finishes on metals and plastics.

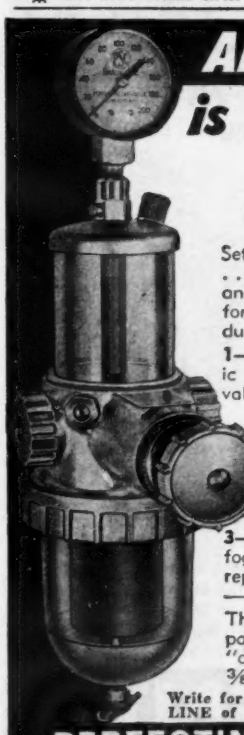
*FREE NRC Vacuum Micronicle

A periodical containing details of above and other news about the field of high vacuum. Write on your company letterhead.

NRC EQUIPMENT CORPORATION
A Subsidiary of National Research Corporation
DEPT. ED-2, 160 Charlemont St., Newton 61, Mass.

For more details circle NED-910 D on enclosed inquiry slip

AIR CONTROL is Cost Control!



3-Way Air Control
REGULATOR – FILTER – LUBE

Set the regulator to desired pressure . . . adjust the oil metering valve . . . and you are assured **3-way protection** for your pneumatic equipment. The dual-action filter is automatic.

1—REGULATES accurately—automatic bleed-off—serves as a shut-off valve—**reduces costly "set-up" time.**

2—FILTERS out dirt, scale and condensate — dual action — interchangeable filter cartridges — protects against damage due to dirty air — **less "down-time".**

3—LUBRICATES with a penetrating fog-like oily mist — reduces costly repairs and replacement of air tools — **controls costs.**

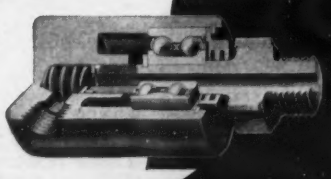
The easiest to install . . . small, compact and only 2 connections, "in" and "out". Available from stock in ¼"-⅜"-½" and ¾" NPT.

Write for Bulletin 80 describing our COMPLETE LINE of Air Control Devices.

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, North Carolina
Baltimore - Buffalo - Chicago - Cleveland - Camden - Los Angeles
New York - Providence - Montreal - Toronto - Hamilton, Canada

For more details circle NED-911 D on enclosed inquiry slip

FAWICK rotorseals have 1000 uses



ROTORSEALS are by far the world's most efficient means of transmitting air, liquids or gases under pressure or vacuum into rotating shafts.

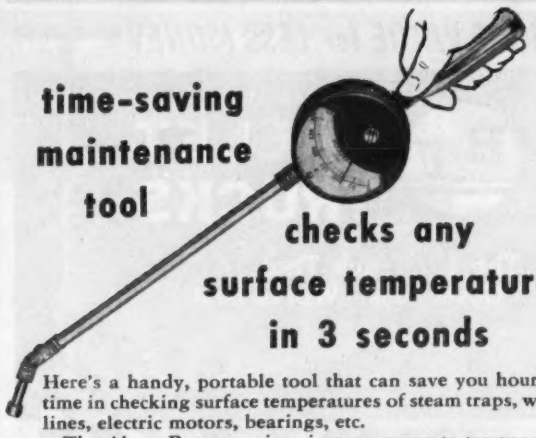
- Thousands of applications
- One to three passages
- Ready-to-use
- Life-sealed lubrication
- Speeds to 5000 rpm
- Pressures to 2000 psi
- Through-hole sizes from ⅜" to 1½"

Write for Bulletin ML-177

FAWICK AIRFLEX DIVISION
FAWICK CORPORATION
9919 Clinton Rd., Cleveland 11, Ohio
In Canada, Fawick Canada, LTD., Toronto

FAWICK AIRFLEX

For more details circle NED-912 D on enclosed inquiry slip



time-saving maintenance tool checks any surface temperature in 3 seconds

Here's a handy, portable tool that can save you hours of time in checking surface temperatures of steam traps, water lines, electric motors, bearings, etc.

The Alnor Pyrocon gives instant, accurate temperature readings of any surface: metallic or non-metallic, flat, curved—even revolving surfaces. It's a well-balanced instrument mounted in a sturdy case for protection against the usual hazards of on-the-job service. Jeweled movement is also heavy-duty, shock-resistant type that will withstand hard and continuous use... performing with laboratory accuracy.

A wide selection of thermocouples and extension arms assures its adaptation to your needs. Eight standard F. scale ranges are available up to 2000° F. Send for complete details contained in Bulletin 4257. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-913 D on enclosed inquiry slip ▲

how you benefit with Lamb® GEARMOTORS

Two-stage helical gearmotor with crank on output shaft to operate circuit breaker. Frame 2 3/16 x 1 1/2

Induction gearmotor with quiet operating three-stage gear train and magnetic brake for rotary office file. Frame 4 1/2 x 2 3/8

Lamb fractional horsepower gearmotors, designed to functionally match your product, provide the important requirements of:

- *low speed*
- *compactness*
- *low weight*
- *high torque*
- *dependability*
- *favorable cost*
- *improved product appearance*

Many years of specialized experience in this field, combined with the finest gear cutting and testing equipment, assure unexcelled performance in Lamb gearmotors.

Write for descriptive folder.

THE Lamb Electric COMPANY KENT, OHIO — A Division of AMERICAN MACHINE and METALS, Inc. In Canada: Lamb Electric Division of Sangamo Company Ltd., Leaside, Ontario

▲ For more details circle NED-914 D on enclosed inquiry slip ▲

New Processes & Materials

ANTISTATIC SPRAY
used on paper, plastics, textiles

Only a light application of Sprayway antistatic spray is necessary to eliminate static electricity on paper, plastics, and textiles being folded, printed, or converted. Packaged in a pushbutton dispenser can, the harmless spray offers long-lasting results on metal rollers, feedboards, and feedarms coming in contact with these materials. It can also be used on tapes, strippers, slitters, joggers, conveyors, drive belts, finger grippers, and other equipment and materials which generate static electricity. • **Sprayway, Inc.**, 7644 S. Vincennes Ave., Chicago 20, Ill.

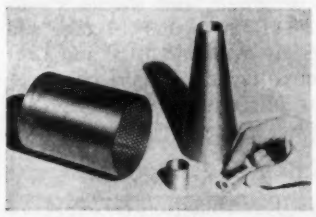
▲ For more details circle NED-916 D on enclosed inquiry slip ▲

LABELING ADHESIVE
holds fast, yet peels easily

Removable labels adhere instantly to polyethylene, polystyrene, metal, and other surfaces when coated with Rubba-Peel labeling adhesive. Nonflammable product is applicable by brush or inexpensive labeling machines. It holds labels tenaciously, yet permits them to be peeled easily without leaving any sticky residue. One to 55-gal quantities are offered. • **Rubba, Inc.**, 1015 E. 173rd St., New York 60, N. Y.

▲ For more details circle NED-917 D on enclosed inquiry slip ▲

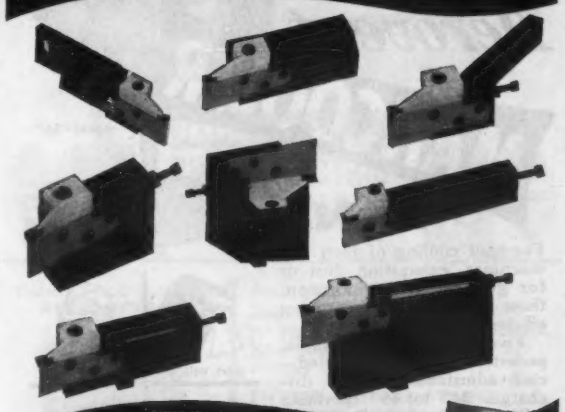
WIRE-WOUND POROUS METAL
offered in cylinders, cones, shapes



Accurate pore size control with ratings of 10 to 20 microns nominal and 25 to 50 microns absolute is offered in Porostrand wound-wire porous metal. It is made in cylinders, cones, and various geometrical figures of revolution. Cylinders have high compression strength, burst strength, and modulus of elasticity. Porostrand is made by winding stranded and solid wires, side by side and layer on layer. The number of layers can be varied to obtain any strength and permeability. Open areas form the pores, and sintering joins the wires into a rigid structure. This porous material can be machined and fabricated by conventional methods. It can be made of iron, nickel, or cobalt base alloys; refractory metals such as tungsten and molybdenum; and almost any wire that can be drawn fine. Filter withstands same heat as the basic wire from which it is made. • **Bendix Aviation Corp.**, Bendix Filter Div., 434 W. 12 Mile Rd., Madison Heights, Mich.

▲ For more details circle NED-918 D on enclosed inquiry slip ▲

NOW... A Carbide CUT-OFF TOOL for EVERY Application . . .



The complete line of P.D.Q. (Portage Double Quick) Manchester cut-off tools includes tooling for all makes of Turret Lathes, Engine Lathes, Production Lathes, Automatics and Cutting-Off Machines.

This wide selection of carbide tools, designed specifically for each type of machine, offers real speed and economy in parting and grooving problems. Write for the illustrated catalog covering all the available standard types. Specials available on request.

PDQ PORTAGE Double-Quick, Inc. 1043 SWEITZER AVENUE • AKRON 11, OHIO

▲ For more details circle NED-919 D on enclosed inquiry slip ▲

ONLY KELLEY ADJUST-A-LIP DOCKBOARDS

Solve These DOCKLOADING PROBLEMS!

DAMAGE TO MERCHANDISE AND TRUCKS

The ADJUST-A-LIP Dockboard lip retracts *behind* dock bumpers. No fixed lip, operating arms or obstructions to damage truck or end loads. No attendant necessary when carrier is positioned.

SMASHED OVERHEAD DOORS

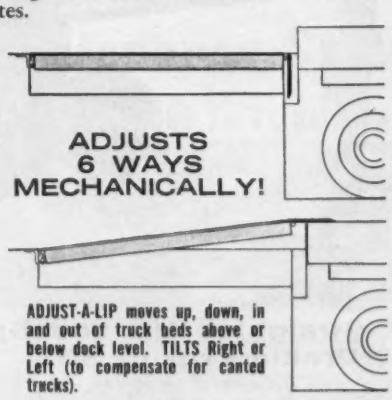
Now, trucks *cannot* back in and cause dockboard to suddenly raise up and smash into overhead doors, or dump men and equipment. Doors remain closed and unit remains at dock *level* for safe cross traffic until carrier is serviced.

LIMITED POSITIONING HOURS

With ADJUST-A-LIP, carriers can be spotted *any time* day or night . . . 24 hours a day.

EXPENSIVE WASTED MAN HOURS

An ADJUST-A-LIP saves both valuable time and labor . . . its long, wide, safe ramp speeds loading. No need to search for and haul loose plates.



FREE

Get the FACTS! Send for details TODAY!

☐ FREE KIT — "How to Plan a Profitable Truck Dock Operation." Get booklets on Dock Safety, Modernizing, Levelation Data, Dock Designs, etc.
☐ FREE SURVEY — No obligation.
☐ Facts and Figures — Get Bulletin titled "How to get an ADJUST-A-LIP for $1.00 a day."

Tear out and attach this coupon to your letterhead. Sign your name and mail to:

HI-LO Adjustable DOCKBOARDS — KELLEY COMPANY INC. 2153 W. MILL ROAD MILWAUKEE 9, WISCONSIN

▲ For more details circle NED-920 D on enclosed inquiry slip ▲

Precise Metering of Corrosive Chemicals with Lapp PULSAFEEDER

CONTROLLED-VOLUME CHEMICAL PUMP

Working with hard-to-handle liquids is routine for the Pulsafeeder. Designed for this kind of work, the Pulsafeeder combines the better features of piston and diaphragm pumps for controlled-volume pumping, eliminating the need for a stuffing box or other leak-likely seal. When the job requires, special corrosion-resistant liquid ends of non-metallic construction are used (illustrated). Parts of solid Lapp Chemical Porcelain, alumina ceramic, and Teflon plastic are combined to assure trouble-free, positive-displacement metering of corrosive chemicals.

WRITE *for Bulletin 59 which gives complete specifications on the full line of Pulsafeeder Pumps. Lapp Insulator Co., Inc., Process Equipment Division, 1804 Poplar St., Le Roy, N. Y.*

Lapp PULSAFEEDER

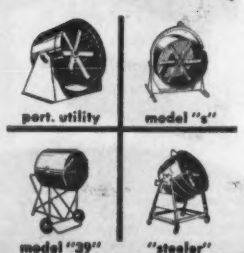
▲ For more details circle NED-915 D on enclosed inquiry slip ▲

increase worker efficiency with

Aerovent MANCOOLER FANS

For spot cooling of men and machines, exhausting dust or for general air circulation, these units aid in improving efficiency and production.

Five portable types—cradle, pedestal and 2 or 4 wheeled—each adjustable for 180° discharge. 24" to 48" (portable utility 16" to 36".) 2, 4 or 6 blades. Heavy-duty construction, with welded-steel guards for maximum safety.



write for free bulletin 250

Aerovent FAN CO. INC.
Ash and Blake Sts. Piqua, Ohio

▲ For more details circle NED-921 D on enclosed inquiry slip ▲

Bellows HAN-D-AIR CYLINDER

Single Acting Model Illustrated

- SAVES TIME in jig and fixture operations
- SAVES TIME in parts positioning
- SAVES TIME in parts ejection

The Bellows HAN-D-AIR is a small (1⅛" bore), rugged air cylinder for scores of *little* jobs—clamping, feeding, ejecting parts, etc. Choice of single and double acting models in strokes of 1", 2", 3", and 4". Lightning fast, its pressure always uniform, it does the job faster, better, and far cheaper than it can be done by hand. Its compact design makes multiple installations easy. The threaded piston rod connects quickly to work loads. Thrust equals air pressure applied (175 psi max.). Port size: ⅛" pipe tap.

WRITE FOR BULLETIN HD-20R. Address Dept. NED-460 1306A-1

The Bellows Co.
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION
AKRON 9, OHIO

▲ For more details circle NED-922 D on enclosed inquiry slip ▲

Now! Straighten Up and Speed Drafting Up to 35%

Bruning's all-new Neoglide drafter literally puts draftsmen in a position to speed drafting.* It provides complete maneuverability on any board *at any angle* without adjustment! U-beam construction offers amazing rigidity, strength, and accuracy. Resistance-free movement of the counterweight and vertical beam provide free-and-easy "floating" action. Touch-control protractor head gives automatic, pin-point angle selection.

*Study of 300 draftsmen showed 35% savings on drawing time — 1/5 the backaches — on vertical or near vertical boards.

BRUNING

Charles Bruning Co., Inc., Dept. 4-VA
1800 Central Rd., Mt. Prospect, Ill.
Offices in Principal U.S. Cities
In Canada: 103 Church St., Toronto 1, Ont.
Please send me more information about all-new Neoglide drafter.
Name _____ Title _____
Company _____
Address _____
City _____ County _____ State _____

▲ For more details circle NED-923 D on enclosed inquiry slip ▲

New Literature & Catalogs

Power Tools Catalog

Boice-Crane Co.—Band and contour saws, jig saws, saw tables, saw-jointers, jointers, belt and spindle sanders, shapers, lathes, planers, drill presses, band filers, grinders, and spinning tools are among power tools listed in 44-page Catalog 60. Many new tools are introduced as Golden Anniversary models to celebrate the 50th year of this manufacturer.

▲ For more details circle NED-924 D on enclosed inquiry slip ▲

Expansion Joints & Flexible Pipe

General Rubber Corp.—Custom-made rubber expansion joints and flexible pipe covered in 6-page folder 850 are successfully used in recirculating water systems, hot water lines, water cooler condenser lines, boiler feed lines, and pump discharge lines to absorb vibration and noise. They afford trouble-free life in many corrosive and abrasive service conditions.

▲ For more details circle NED-925 D on enclosed inquiry slip ▲

Protective Coating Guide

Master Bronze Powder Co.—Derusto protective coatings, Galv-a-grip, colored aluminum, new Minit-Finishes, and special chemical resistant and Hi-Heat rust inhibitive coatings are reviewed in 16-page industrial catalog. Helpful Selector Guide evaluates technical properties of various coatings and enables reader to select the most suitable product for a wide variety of industrial uses.

▲ For more details circle NED-926 D on enclosed inquiry slip ▲

Slotted Angle & Accessories

Lyon Metal Products, Inc.—Information on versatile slotted angle for making storage racks, frames, machine guards, pipe mountings, partitions, and special stands is provided in Catalog 180. Both regular 14-gage and heavy-duty 12-gage angles are available in 10 and 12-ft lengths. Accessories covered include support channels, steel panels, gussets, cleats, and cutter.

▲ For more details circle NED-927 D on enclosed inquiry slip ▲

Unitized Conveyors

Standard Conveyor Co.—Twenty-two pages of descriptive matter, charts, and illustrations on Handidrive unitized conveyors are provided by Bulletin 112. Bulletin makes it possible to order from pre-engineered stock standards such items as gravity and power roller conveyors, inclined belt conveyors, drive units and other components for on-the-job installation by unskilled workers.

▲ For more details circle NED-928 D on enclosed inquiry slip ▲

Thread Gaging

Johnson Gage Co.—Comprehensive 16-page Catalog BC-1-60 on Ring-Snap and Roll-Snap thread comparators includes recommended gaging procedures never before published. It covers use of differential readings to determine deviations in product threads and product thread acceptability. Sections are also devoted to screw thread gaging terminology and wear in comparator gaging elements.

▲ For more details circle NED-929 D on enclosed inquiry slip ▲

Plastics for Industry

Almac Plastics, Inc.—56-page 1960 catalog and price list presents information on grades, sizes, and tolerances of plastic sheet, rod, tubing, and other forms. Plexiglas, Lucite, vinyl, acetate, polyethylene, polystyrene, phenolic, nylon, Teflon, Kel-F, Fiberglas, Delrin, and Micarta laminates are covered.

▲ For more details circle NED-930 D on enclosed inquiry slip ▲

Gas Scrubbers & Cyclones

Schutte & Koerting Co.—Ejector-Venturi scrubbers, venturi throat and condensing scrubbers, and cyclonic scrubbers and separators for control of fumes, gases, vapor and dusts in pollution control and chemical processing are subject of 12-page Bulletin 4R. Tables of gas handling capacities for different water pressure, drafts, and sizes facilitate proper selection of the equipment.

▲ For more details circle NED-931 D on enclosed inquiry slip ▲

Centralized Lubrication Systems

Eaton Mfg. Co., Farval Div.—Farval centralized lubrication systems provide a mechanical method of dispensing measured quantities of oil or grease under pressure to a group of bearings from one central station. Revised 24-page Bulletin 26-T describing these systems points up advantages and principles of operation. Typical applications are shown.

▲ For more details circle NED-932 D on enclosed inquiry slip ▲

MORE VALUE for LESS MONEY

FULLY HYDRAULIC
BT PALLET TRUCKS
The Lift Truck That Costs Less—Works Best

Now Only $350.00 F.O.B. Chicago

Extra rugged construction for Heavy Duty use. Precision built, BT fork-type PALLET TRUCKS are fully hydraulic, easy to use, highly maneuverable. Pivots 90°, both directions. SKF ball-bearing wheels, (available in steel, rubber or Bakelite). For single or double face pallets and skids. Lowered Height: 3¼" - 5" Lift. A real buy.

Model BT-24
2400 lb. Capacity.....$350.00
Model BT-44
4400 lb. Capacity.....$395.00
WRITE — WIRE — PHONE

YOUR CHOICE OF SIZES IN EITHER MODEL:
Fork Widths: 20½" or 27"
Fork Lengths: 36", 42" & 48"
(Specify width, length and wheel type when ordering)
(Dealer Inquiries Invited)

INDUSTRIAL HANDLING EQUIPMENT CO.
1221-23 West Monroe • Chicago 7, Illinois • MOnroe 6-8554

▲ For more details circle NED-933 D on enclosed inquiry slip ▲

ELIMINATE BUGABOOS OF CORROSION AND MAGNETISM WITH KNU-VISE STAINLESS STEEL CLAMPS

Knu-Vise stainless steel toggle clamps eliminate frustrating magnetic attraction and corrosion while spot welding, or while working near acids.

The complete stainless steel line contains 18 clamps with either horizontal, vertical, or T-style handles. There are types for side mounting and pull clamps as well. Write today for complete information. A standard or a special Knu-Vise clamp will probably be the answer to your application.

SEE LAPEER EXHIBIT, BOOTH NO. 726, A.S.T.E. SHOW

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.
3062 DAVISON ROAD
LAPEER, MICHIGAN
WESTERN DIV.: PECK and LEWIS CORPORATION 4436 Long Beach Ave., Los Angeles 58, Calif., ADams 3-7146
CANADIAN DIV.: HIGGINSON EQUIP. SALES LTD. 1131 Pettit Road, Burlington, Ontario

▲ For more details circle NED-934 D on enclosed inquiry slip ▲

New! Gentle-Action Elevator
ECON-O-LIFT

A remarkable achievement permitting the rapid handling of loads without breakage, dusting or marring . . . ideal for elevating, lowering or transferring any fragile materials. (a) Trays remain separated and upright at all times—even at turns—except at load and unload points. (b) Exclusive ECON-O-SPACER action moves trays together into interlocking bank at loading point—no spillage between trays ever. (c) Trays turn upside-down *only at unloading point* for dumping, quickly return to horizontal for travel—no fallout at turns. All these ECON-O-VEYOR advantages at great savings in cost!

Write For New "Econ-O-Lift" Booklet

Distributed Nationally By
CREAMERY PACKAGE MFG. CO., INC.
offices in major cities in U.S. & Canada

ECON-O-VEYOR
224 Glen Cove Ave., Glen Cove, N. Y. INdependence 1-3360

▲ For more details circle NED-935 D on enclosed inquiry slip ▲

new SCHERR
TOOLMAKERS MICROSCOPE

WITH INTERCHANGEABLE DIAL TEMPLETS AND OCULARS
Reading Angles in Minutes
Thread Templets for U.S. National Thread Profiles- 6-80 Pitch. Radii Templets, etc.
LARGE MICROMETER DRUMS READ DIRECTLY IN .0001"
Measuring Range 2" x 2" and other sizes
A moderately priced PRECISION MEASURING TOOL for Toolroom and Inspection
For Complete Information request our 96 Page Catalog — Contact any of our 4 "Coast to Coast" Locations or your nearest Local Distributor.
SCHERR-TUMICO
PRECISION MEASURING TOOLS AND INSTRUMENTS
WAREHOUSE STOCK, SHOWROOMS & SALES OFFICES AT
NEW YORK: 200 Lafayette Street, New York 12, N. Y.
ST. JAMES: St. James, Minnesota
LOS ANGELES: 3337 West Olympic Blvd., Los Angeles 19, Cal.
CHICAGO: 5045 W. Harrison, Chicago 44, Ill.
When writing to any of the above locations, refer to DEPT. H-4
For more details circle NED-936 D on enclosed inquiry slip

These famous shafts mean easier roll handling, faster, at lower cost!

Tidland
PNEUMATIC SHAFTS
for all roll winding, and unwind equipment
Light, strong, easy-to-use for fast set-ups. Positive uniform, non-slip grip. No damage to cores or material. Collapsible, instant release! A complete line, custom-fitted to any need, any length, any diameter, for any size rolls.
LEAF-TYPE
LUG-TYPE AND
SPECIAL SHAFTS
FOR:
PAPER,
PAPERBOARD,
PLASTIC FILMS,
METALS, FOILS,
LAMINATES,
TEXTILES,
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Sold exclusively by
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Franklin Road, Dover, N. J.
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15 Hatt St., Dundas, Ontario
France: Batignolles-Chatillon
5 Rue De Monttessuy, Paris (7e) France
AA-366
For more details circle NED-937 D on enclosed inquiry slip

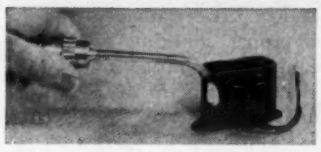
New Processes & Materials

CONCRETE PATCH MATERIAL
feathers down to 1/16-in. thickness

Sealing qualities of Thoroseal are combined with the adhesive and acid-resistance of acrylic resin in Thoropatch, a waterproof acrylic latex patching material for concrete and masonry. It can be used indoors or out on concrete, brick, stone, and other masonry surfaces, providing a nonshrinking repair or floor leveling job. Layers from 1/16 to 2 in. can be feathered down to a 1/16-in. thick edge. A thicker mix is used for deeper patches. • **Standard Dry Wall Products, Inc.**, New Eagle, Pa.

For more details circle NED-938 D on enclosed inquiry slip

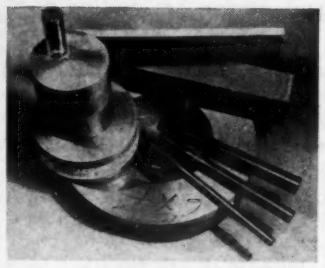
EPOXY CASTING RESIN
stable over −100 to 350° F range



Fire retardant Stycast 1231 epoxy casting resin cures at room temperature and has excellent adhesion to metals, plastics, and ceramics. Large embedments can be made because of resin's low thermal coefficient of expansion and high heat stability. It is stable over a −100 to 350° F range. Resin can be color coded to specification, although normally it is supplied black. • **Emerson & Cuming, Inc.**, 869 Washington St., Canton, Mass.

For more details circle NED-939 D on enclosed inquiry slip

WORKABLE CARBIDES
heat and corrosion resistant items can be machined right in the shop



Only conventional tools are needed to machine Ferro-Tic S, a powder metal stock consisting of hard titanium carbide crystals in a matrix of stainless steel. Material enables production of carbide parts and tools to withstand high temperatures or corrosives in the shop. Softer of two grades, S-45, can be machined readily with any single or multiple point cutting tool. Harder grade S-55 is suitable only for basic operations such as sawing, turning, and drilling.

Both grades may be ground and joined to other metals by welding or brazing. Typical uses include valve or valve seats, knives and choppers, pump seals, nozzles, bearings, and forming tools. Rectangular forms up to 1 x 2 x 7 in. and round bars up to 2 in. OD and 6 in. long, or 6 in. OD and 2 in. long are available. Special sizes can be ordered. • **Chromalloy Corp.**, Sintercast Div., 132 Woodworth Ave., Yonkers 2, N. Y.

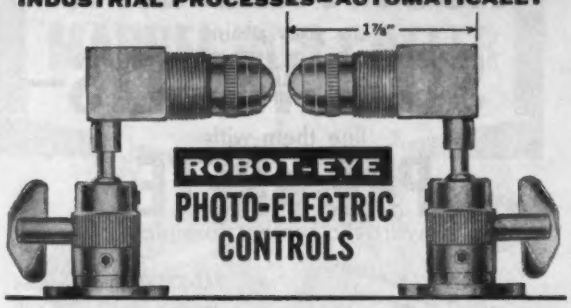
For more details circle NED-940 D on enclosed inquiry slip

ARC WELDING FLUX
sustains high weld travel speeds

Submerged arc welding Autoflux H-400 for single and multiple pass work at currents up to 1200-amp will sustain high travel speed with quality deposit. It will work through moderate mill scale or rust on light or heavy gage material, and slag is easy to remove. Typical physical properties when used with mild steel welding wire are 59,000 psi yield and 71,000 psi tensile strength, 30 per cent elongation, and 64 per cent reduction of area. Flux is offered in 80-lb bags or plastic-lined 80-lb drums. • **Hobart Brothers Co.**, Hobart Square, Troy, Ohio.

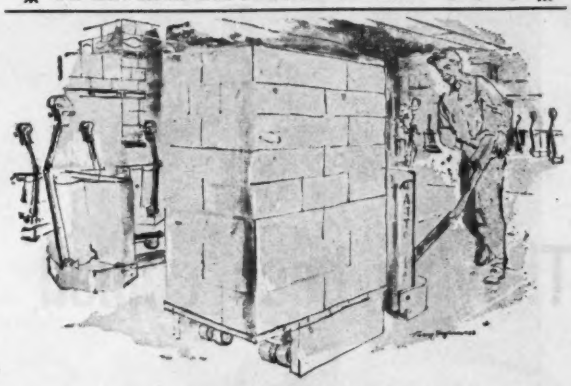
For more details circle NED-941 D on enclosed inquiry slip

count, inspect, control
INDUSTRIAL PROCESSES—AUTOMATICALLY



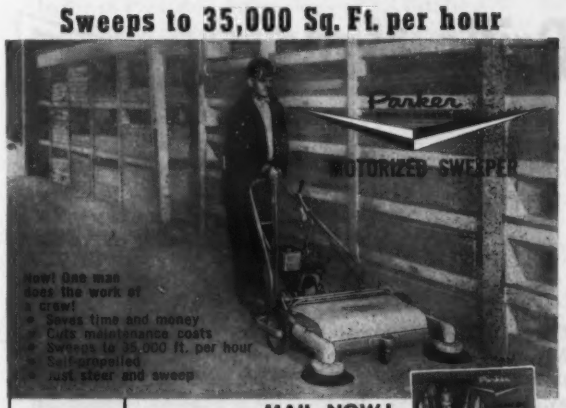
ROBOT-EYE
PHOTO-ELECTRIC CONTROLS
Transistorized and Tube AMPLIFIERS

Plug-in relays, receptacles for plug-in connection of lamps and cells. Additional Plug-in accessories include counters and time delays.
MINIATURIZED
Small, for "tight-spot" installation, yet rugged for long service. Accurate, for precise automatic control in virtually any industry.
INTER-CONNECTING
Plug-in terminals available for quick connection to any of a wide range of Amplifiers. This design enables you to select the most economical amplifier for your job requirements.
INEXPENSIVE
Standard Set P-5 is $17. Set P-5S is $21. Amplifiers start at $39.50. For complete data, write for Brochure CP-4.
standard INSTRUMENT CORPORATION
657 BROADWAY, NEW YORK 12, N.Y.
For more details circle NED-942 D on enclosed inquiry slip



When wheel costs get "out of hand"
...cut them with DISOWHEEL®
Your material handling trucks, equipped with genuine Disogrin® - treaded Disowheels, take full advantage of the wheels' ability to carry big loads longer—without failing and without damaging the floors. You get continuous service without costly truck downtime for wheel replacement, elimination of stand-by trucks and no expensive floor repair bills. With Disowheels, you are assured of full-time, long-time wheel performance at less cost!
Contact your local distributor today for Disowheels—manufactured by the one company whose sole business is making superior quality wheels.
DISOGRIN INDUSTRIES
510 SOUTH FULTON AVENUE • MOUNT VERNON, NEW YORK
Offices & Distributors in Principal Cities
For more details circle NED-943 D on enclosed inquiry slip

SLASH
Maintenance Costs
Sweeps to 35,000 Sq. Ft. per hour



TURBO SWEEP . . . Dust-free sweeping at low cost. Sweeps 50,000 ft. per hr.

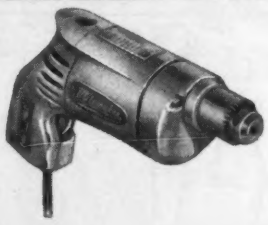
MANUAL . . . Easy to maneuver around boxes, crates, in aisles. 20" and 28".

MAIL NOW!
PARKER SWEEPER CO., Dept. NE
Springfield, Ohio
Send me free booklet and give me money-saving facts!
Name
Company
Address
City State
For more details circle NED-944 D on enclosed inquiry slip

add years of
RUST-FREE LIFE
to your plain
STEEL VESSELS—
line them with
PRE-KRETE
hydraulic cement formula

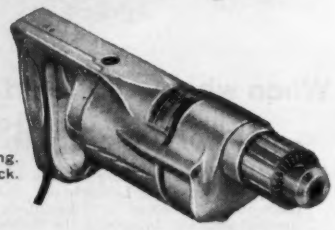
PRE-KRETE is the corrosion resistant cement lining with special additives and intimate blending of all ingredients. It won't permit corrosion, won't crack, won't chip, won't color or flavor water. It adds years of rust-free life to plain steel vessels. It lowers maintenance costs appreciably. Available from a nation wide network of franchised applicators. Send for FREE booklet on PRE-KRETE. Address —

Division of The Patterson-Kelley Co., Inc.
pocono fabricators inc.
East Stroudsburg, Penn.
▲ For more details circle NED-947 D on enclosed inquiry slip ▲



Model 0120
Heavy-duty ¼"
Hole-Shooters.
650 to 5000 RPM.
Full ¼ HP at the chuck.

They've been copied



Model 1000
½" cap. Ideal for general-purpose drilling.
Full ⅓ HP at the chuck.

but never equalled

Model 1600
½" production drill,
full ½ HP at the chuck.

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Most Powerful
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Compare! Dollar for dollar, no other brand can match MILWAUKEE's heavy-duty industrial drills for *power, performance, and dependability!* 38 models available from ¼" to 1¼" — a size and speed for every need . . . built to the highest quality standards for easier, faster production drilling.

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look under "tools—electric"

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5320 W. State St., Milwaukee, Wisconsin
"Originators of The Famous Hole-Shooters"
Find Your Nearest Dealer in the Yellow Pages
▲ For more details circle NED-948 D on enclosed inquiry slip ▲

New Literature & Catalogs

Watertight Sealant

A. C. Horn Companies—Watertight joints on curtain walls, glass enclosures, roofs, flashings, sidewalks, flooring, pipe joints, and air conditioning ducts can be made with Hornflex Thiokol LP-32 sealant, subject of 16-page Catalog 6543. Physical properties, advantages, uses, directions for use, and quantity estimation are among contents.

▲ For more details circle NED-949 D on enclosed inquiry slip ▲

Laminated Plastics

General Electric Co., Laminated Products Dept.—Textolite industrial laminated plastic sheets, rods, and tubes are described in 16-page Catalog L-CDL-494. Applications, special features, characteristics, and sizes available in over 50 grades are covered. Phenolics, silicones, melamines, and epoxies with various filler bases are included.

▲ For more details circle NED-950 D on enclosed inquiry slip ▲

Maintenance & Safety Markers

W. H. Brady Co.—Conforming to ASA, NEMA, and NSC codes, and government and military specifications, the self-sticking maintenance and safety markers described and shown in Catalog 520 are divided into 15 categories. Products for proper marking of piping, plant wiring, electrical equipment, lubrication of machinery, and marking of hazardous plant areas are included. Prices and testing samples are among contents.

▲ For more details circle NED-951 D on enclosed inquiry slip ▲

Rotameters & Accessories

Brooks Rotameter Co.—Basic advantages of variable area flow meters and pictures of the various types of meters in their specific areas of application are among contents of Bulletin 110. They handle up to 45,000 psi and 1000° F with no maximum capacity limit. Interchangeable accessories which increase rotameter versatility are detailed.

▲ For more details circle NED-952 D on enclosed inquiry slip ▲

Handling System Control Panels

Fuller Co.—Four basic types of control panels for a wide variety of automatic materials handling systems are subject of 12-page illustrated Bulletin G-9. They are "walk-in" master control panel, floor and wall mounted types, and explosionproof type. Applications include pelletizing plant for taconite, material feed in cement mill, handling plastic pellets, and others.

▲ For more details circle NED-953 D on enclosed inquiry slip ▲

Gas Welding & Cutting Torches

Air Reduction Sales Co.—Descriptions, features, specifications, and photographs of line of gas welding and cutting hand torches, outfits, tips, and accessories are found in 36 pages of Catalog ADC 702E. Also included are Bernz-O-Matic LP-gas kits for flame heating, natural gas heating and brazing tips, and various cutting and washing tips.

▲ For more details circle NED-954 D on enclosed inquiry slip ▲

Static Spring Seals

Hydrodyne Corp.—Temperature range from −400 to 2000° F is claimed for Skinner high temperature, high pressure static spring seals for rotating applications. Described in 6-page Bulletin 101SD, they are available in different metals, are reusable, and offered in sizes from 11/32 to 24 in. OD. Also included are typical installation diagrams.

▲ For more details circle NED-955 D on enclosed inquiry slip ▲

Positioning & Program Controls

Jordan Controls, Inc.—Expanded line of linear and rotary actuators in 20 sizes delivering torques from a few ounce-inches to 3500 lb-in. is detailed in 16-page Bulletin J-105. Also covered are six basic types of remote positioners, machine tool point-to-point position and rate control, punch card formula and program control, and closed loop process loop control.

▲ For more details circle NED-956 D on enclosed inquiry slip ▲

Fluid Service Packings

Greene, Tweed & Co.—Revised 8-page Catalog FF-1059 and price list affords information on 14 types of Palmetto fabric, foil, plastic, and filament packings for corrosive fluid, solvent, gas, water, chemical, gasoline, steam, and hot gas and oil service. Temperature limits range up to 1200° F. Sizes range from ⅛ to 1 in. in 1/16-in. graduations.

▲ For more details circle NED-957 D on enclosed inquiry slip ▲

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IMMEDIATE
DELIVERY
TUNGSTEN
CARBIDE
GAGES

The finest quality gages on the market!

Immediate delivery in size range .060 to .750
LARGER SIZES—DELIVERY SLIGHTLY LATER

Finest Double-end go & no go reversible pin gages — made of the highest quality Tungsten Carbide.
Accuracy guaranteed to XX tolerance.
Mirror finished, precision lapped.

FOR ADDITIONAL INFORMATION AND PRICES, WRITE TO:
DUNDICK TOOL WORKS, INC.
3410 West 31st St.
Chicago 23, Illinois
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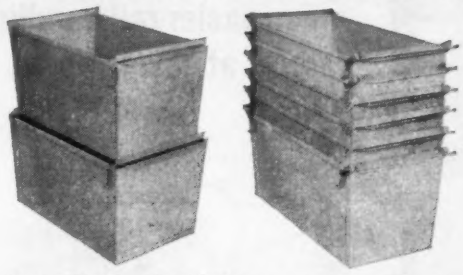
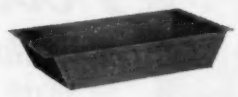
STACK.. or ..NEST!

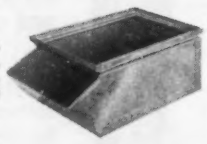


New STERLING STACK/NEST pans stack securely when full, nest when empty for minimum storage space. Side stops position pans centrally when stacked. Sturdy, economical, available in sizes to your requirements. *Write for details.*

Steel NESTING PANS
Sizes tailored to your needs. Rugged pans with 1001 uses.



REGULAR & BIN FRONT STACKING BOXES
Strongest top rim for lifetime use. Available in many sizes.



STERLING Factory Equipment Co.
231 Charles St., Providence 4, R. I.
Established 1935
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Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

If your problem is high speed coating of paint, varnish, glue, latex, etc. — POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency. Illustrated is just one of hundreds of special machines. It laminates rolls of materials up to 20" wide at speeds up to 50 feet per minute.

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POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling
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WHATEVER YOUR BENDING PROBLEM

Whether it's production bending or piece bending of pipe, tubing, bus bar, reinforcing bar or structural metal, there's a PEDRICK machine to do the job—fine, fast and economically.

PEDRICK TOOL AND MACHINE CO.
3640 N. Lawrence St., Phila. 40, Pa., Dept. 6.

BEND WITH PEDRICK

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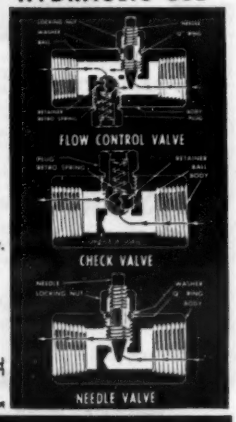
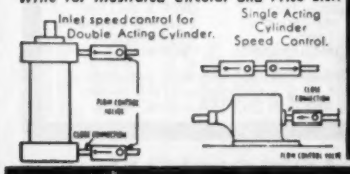
Get Easier, More Accurate Cylinder Speed Control with Pneu-Trol® VALVES IN AIR OR HYDRAULIC USE

2,000 (brass or aluminum) and 5,000 (steel) p.s.i.

Pneu-Trol Valves combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to seat, requiring only a slight differential pressure to fully open or close it. Check Valve and Needle Valve incorporate single function features of Flow Control Valve. All valves available in 5 female pipe sizes — 1/8" to 3/4". Valve bodies are made from brass, aluminum, steel or stainless steel. Attractive Prices — Immediate Delivery.

Write for Illustrated Circular and Price List.





AUTOMATION COMPONENTS AUTO PONENTS INC. 2929 GRANT STREET BELLWOOD (Chicago Suburb) ILLINOIS

▲ For more details circle NED-962 D on enclosed inquiry slip ▲

New Processes & Materials

LAYOUT FLUID in 12-oz self-spraying can

Sprayon No. 603 blue layout spray is packaged in 12-oz aerosol can and dries instantly to a smooth, dark, non-glare coating that will not rub off. Uniform coating is well suited to scribing of fine lines for precision work. Companion No. 606 layout fluid remover is packaged in 16-oz self-spraying container. It quickly and cleanly removes layout fluid. • **Sprayon Products, Inc.**, Industrial Supply Div., 2075 E. 65th St., Cleveland 3, Ohio.

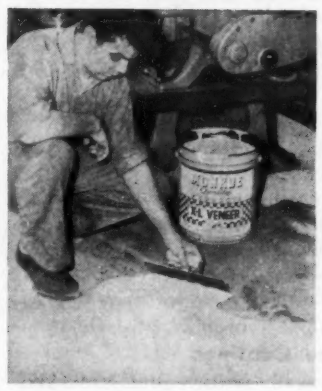
▲ For more details circle NED-964 D on enclosed inquiry slip ▲

CLEANING-BURNISHING COMPOUND prepares parts for barrel plating

Self-tumbling steel, brass, or copper parts are prepared for barrel plating by process involving use of Clepo 12-K combination cleaning-burnishing compound. The white, dust-free granular compound is added to water and loaded with work into an oblique barrel for tumbling for 5 to 30 min. After tumbling, parts are rinsed with clean water, leaving them free of water break, lightly deburred, and also burnished. Parts require only an acid dip and rinse prior to plating. • **Frederick Gumm Chemical Co.**, 538 Forest St., Kearny, N. J.

▲ For more details circle NED-965 D on enclosed inquiry slip ▲

NONSLIP FLOOR SURFACING also usable on stairs and ramps



In addition to red, green, and gray colors, X-L Veneer nonslip floor surfacing is now available in a luminous yellow that glows in the dark. This added safety feature makes the material especially suited for use on dark steps, ramps, and similar areas. It contains an abrasive filler and aggregate combined with a heavy bodied, synthetic plastic base material and solvents. It is easily troweled or spread on steps, inclines, and floors to form a thin, tightly bonded veneer that is slip resistant whether wet or dry. It is impervious to gasoline, alcohol, fats, chemicals, and water, and is fire retardant. • **Monroe Co.**, Dept. XL, 10703 Quebec Ave., Cleveland 6, Ohio.

▲ For more details circle NED-966 D on enclosed inquiry slip ▲

Just a single stroke!...

CUTS ROUND RODS 1/8" to 7/8" on a

MARVEL ROD CUTTER

Available in three models:

No. 5	1/8	3/16	1/4	5/16	3/8
No. 6	3/8	7/16	1/2	9/16	5/8
No. 7	3/4	1/2	5/8	3/4	7/8

These are bench models, but the No. 7 MARVEL Rod Cutter can be furnished mounted on legs. See your Industrial Distributor or write us for literature and prices.

ARMSTRONG-BLUM MFG. CO.
5700 W. Bloomingdale Ave. • Chicago 39, U.S.A.
Manufacturers of the outstanding MARVEL Metal Saws.

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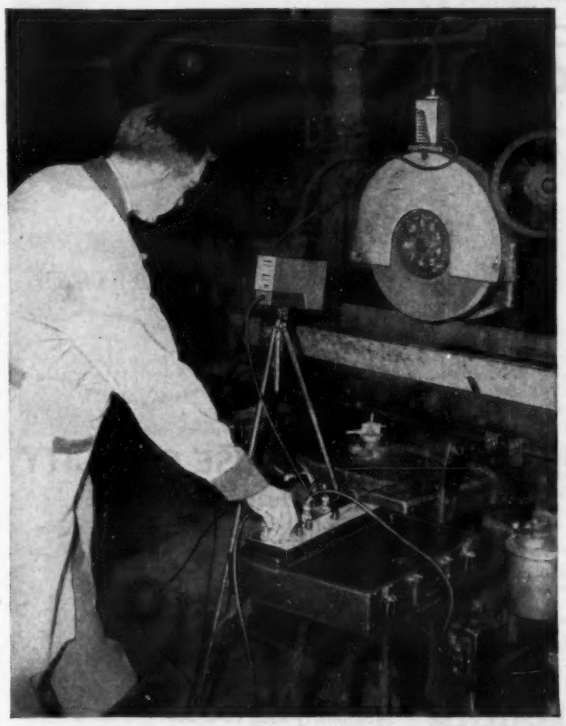

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ECONOMICAL...EVEN FOR THE SMALLEST SHOP! OFFERS EASY, ONE-MAN OPERATION

In-Place Precision Balancing—of all rotating machinery. Quickly indicates the angle and amount of unbalance by means of meter and stroboscopic light. High sensitivity—adjustable from below 10 millionth of an inch to over 1/10" - 1/8" amplitude of vibration.

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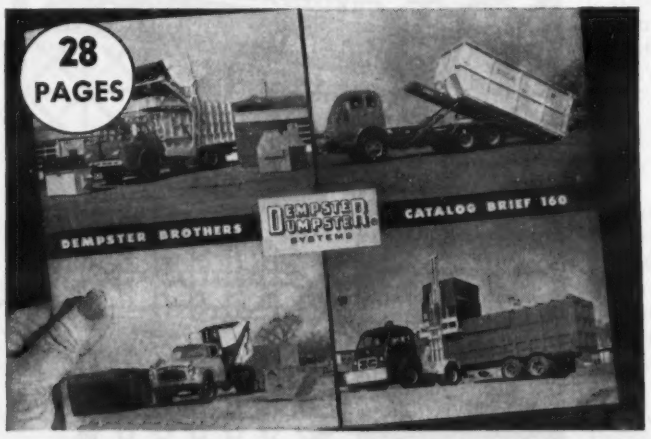
Dept. SS-40, 1850 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle NED-968 D on enclosed inquiry slip ▲

New Catalog Describes Latest Developments in Waste and Refuse Storage and Removal

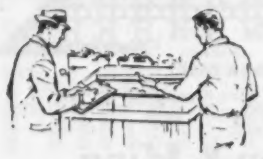


New Techniques Cut Cubic Yard Removal Costs to Record Low

This new 28-page color catalog describes remarkable new developments in waste control and disposal that have, within the last two years, obsoleted many systems now in use. Cubic yard handling costs have been reduced to a point where many firms and municipalities are saving thousands of dollars annually that they were previously spending to operate old-style equipment.

Materials handling and waste disposal are two of the few areas of large potential cost reduction remaining in manufacturing and municipal administration. This new catalog has a bearing on both of these areas of operation.

To get your copy of this new fact-filled catalog, write today.



FREE SURVEY WITHOUT OBLIGATION

Dempster Field Engineers, located in all sections of the country, make thousands of cost-finding refuse storage and collection surveys each year, without cost or obligation. If you would like to know your disposal costs, and what—if any—avenues of improvement exist, write today on your letterhead.

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SKINNER 3-WAY SOLENOID VALVES SOLVE YOUR CONTROL SYSTEM PROBLEMS

Whatever your problem in controls . . . in machine tool automation, automatic clutching or braking, packaging, instrumentation, laundry equipment, air conditioning, or in any of thousands of applications involving air and hydraulic cylinders or pressurized mechanisms . . . Skinner has the answers.

Skinner design leadership and quality manufacture of solenoid valves has been proved by universally successful use. And as control problems become more complex, Skinner keeps pace with new designs, new valves, and continued top quality production.

When you specify solenoid valves, specify Skinner. All Skinner solenoid valves are distributed nationally. For complete information, contact a Skinner Representative listed in the Yellow Pages or write us at Dept. 434.

SKINNER ELECTRIC VALVES

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CAN MATERIALLY INCREASE WAREHOUSE CAPACITY

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- High Safety Factor (5 to 1)
- Low Cost
- Light Weight
- Accurate
- Easy to Read
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Martin-Decker Corporation
3431 Cherry Ave., Long Beach 7, Calif.

MARTIN DECKER — Precision Pressure Instruments—Testing—Weighing—Load and Force Measurement

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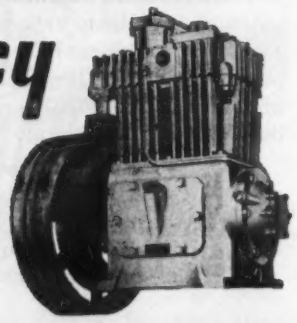
Lubrication? AUTOMATIC WITH Quincy



SAFE-Q-LUBE is the exclusive Quincy automatic pressure lubrication system that guards bearings against damage in case of oil pressure drop. If this happens, the SAFE-Q-LUBE feature automatically unloads the compressor.

An important advantage like that means less maintenance worries and longer compressor life.

Quincy compressors are built to "take it" and last longer under all conditions and to deliver a maximum of low cost, dependable air power.

Authorized Service available across the country around the clock. Models 1 to 90 CFM. *Send for catalog.*

QUINCY COMPRESSOR CO., Dept. N-460, Quincy, Ill.
Makers of the World's Finest Air Compressors

▲ For more details circle NED-971 D on enclosed inquiry slip ▲

New Literature & Catalogs

Tap Selector

Hanson-Whitney Co.—Taps for all purposes, regardless of the type of material, can be ordered easily by catalog number with the help of 24-page Tap Selector No. 1. Charts indicate what stock taps are available for all classes of thread fit. It includes a section on price and gage information.

▲ For more details circle NED-972 D on enclosed inquiry slip ▲

Tool Room Fixtures & Devices

Lassy Tool Co.—Multipurpose work holders for production and toolroom use, hand tappers and accessories, a universal tap and die guide for drill press and lathe tapping and threading, and a master angle plate available in two sizes and six models are illustrated with prices in 12-page 1960 catalog. Tools provide fast setups and improve quality in rapid production operations.

▲ For more details circle NED-973 D on enclosed inquiry slip ▲

Small Tubing Guide

Posen & Kline Tube Co.—Basic guide to selection and use of stainless steel tubing ranging from 33-gage hypodermic needle sizes to heavy-wall high pressure tubing up to 5/8 in. OD is now available. Property data, sizes, tolerance, and weight information for all commonly used shapes and sizes are tabulated.

▲ For more details circle NED-974 D on enclosed inquiry slip ▲

Rubber Bonded Abrasives Manual

Cratex Mfg. Co.—This maker of resilient rubber bonded abrasive wheels, points and sticks for microdeburring, smoothing, and polishing is offering an industrial application manual. It provides case histories on a variety of typical applications and a copy of the latest Cratex catalog. Methods of mounting, dressing, and trueing are reviewed along with recommended operating speeds.

▲ For more details circle NED-975 D on enclosed inquiry slip ▲

Self-Locking Inserts

Boots Corp.—Specifications and application information on Banc-Lok self-locking inserts and tapped holes are presented in 8-page catalog. Features of each and its advantages in fastening plastics, sheet metal, and composition materials are made clear by cross-section application drawings.

▲ For more details circle NED-976 D on enclosed inquiry slip ▲

Protective Maintenance Coatings

Glidden Co.—Nontechnically written Brochure 04579 describes a number of protective maintenance coating systems and matches them with specific application problems. Systems offer protection against general weather, high heat, and mild chemical fumes; severe weather and moderate chemical corrosion; salt, marine growth, and severe acids and alkalies; and solvents, caustics, mild acids, and abrasions.

▲ For more details circle NED-977 D on enclosed inquiry slip ▲

Work Gloves

Monte Glove Co.—Wide selection of work gloves shown in catalog permits fitting gloves to a job. Line includes gloves of leather, neoprene coated, plastic coated, abrasive finish plastic coated, and other materials. Company is a producer of nylon-reinforced flannel gloves and a newly developed Plied-Yarn flannel glove.

▲ For more details circle NED-978 D on enclosed inquiry slip ▲

Plastic Electronic Products

Garlock Packing Co.—24-page Bulletin AD-169 outlines mechanical and electrical design and environmental characteristics of Chemelec Teflon, nylon, Kel-F, Delrin, and other plastic electronic components. Covered are stand-off and feed-through insulators, tube base connectors, test points, miniature sockets, copper-clad Teflon for printed circuits, spaghetti tubing, and grommets.

▲ For more details circle NED-979 D on enclosed inquiry slip ▲

Drill Press Feeds & Drill-Tap Units

Beckett-Harcum Co.—Drill press feeds reviewed in 8-page Catalog F-60 consists of standard and heavy duty air powered feeds and hydraulic feeds for automating large drilling machines. Bulletin also describes air powered drilling and tapping machines in floor and multiple-unit table combinations. Drilling-tapping models will tap direct from a drill chuck or multiple drill head.

▲ For more details circle NED-980 D on enclosed inquiry slip ▲

PEAK EFFICIENCY FOR YOUR MACHINE THROUGH PRODUCTION CONTROL AND PREVENTATIVE MAINTENANCE with the VDO TACHOGRAPH

What is the Tachograph?
This instrument records in chart form *when* and *how fast* any machine operated or how long it took to complete a process.

What does the Tachograph do?
This precision instrument keeps a running record of how fast your equipment has been operating at any given time and total time.

How can the Tachograph help you?— The VDO Tachograph locates and corrects bottlenecks by helping to relocate men and equipment to areas of necessity. Usable for time studies and to evaluate and reduce costs.

OTHER ENGLER INSTRUMENTS

HOUR METER . . . AC-DC

Electrically registers hours and minutes of engine operation. For use on any powered equipment — DC powered rolling stock or stationary machines on AC line current.

PRODUCTOLOG . . .

Electrically records in chart form off and on time of any machine or process. Shows on chart exactly when down time occurred and for how long. Access window enables operator to write in the reason for stoppage.

Engler Instrument Co.
Dept. NE-4, 280 Culver Avenue Jersey City 5, New Jersey

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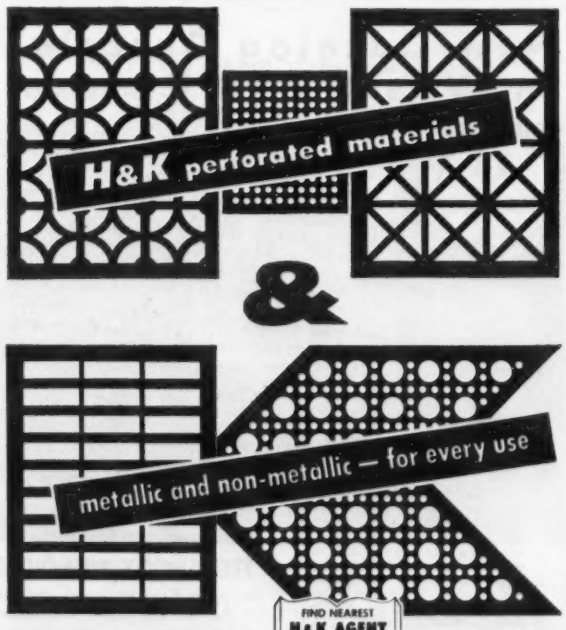


Write for General Catalog 75 and/or Stock List Brochure

FIND NEAREST H&K AGENT in the 'Yellow Pages'

Listed Under "Perforated Metals"

THE Harrington & King PERFORATING CO. INC.

Chicago Office and Warehouse 5658 Fillmore St., Chicago 44 • New York Office and Warehouse 114 Liberty St., Dept. NED, New York

▲ For more details circle NED-983 D on enclosed inquiry slip ▲

free

new filler metals chart simplifies selection of welding rods and electrodes

Tells at a glance the type rod or electrode to use for welding stainless, low alloy, non-ferrous and light metals. Covers manual, automatic and semi-automatic welding. Includes data on coated electrodes, coiled and spooled bare electrodes, cut bare rods, spooled bare wire, flux cored electrodes and bonded fluxes. Reverse side packed with AWS standard welding symbols and descriptions in handy form. SEND TODAY! ARCOS CORPORATION, 1500 South 50th Street, Philadelphia 43, Pa.

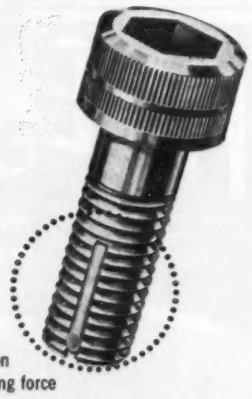
ARCOS | Filler Metal Specialists

▲ For more details circle NED-984 D on enclosed inquiry slip ▲

PARKER-KALON...

The most complete line of socket screws—the quality line of socket screws—now introduces the newest line of socket screws!

NEW PARKER-KALON® SOCKET SCREWS *with* **LONG-LOK® INSERTS!**



YOUR OWN TESTS WILL PROVE THESE OUTSTANDING QUALITIES

- Higher resistance to shock and vibration
- Superior thread engagement and locking force
- Higher percentage of reusability
- Eliminates need for lock washers or safety wires

GET FREE SAMPLES AND TECHNICAL DATA from your P-K industrial distributor—or write directly to Parker-Kalon for Bulletin No. 862

PARKER-KALON

a division of General American Transportation Corporation, Clifton, New Jersey. Offices and Warehouses in Chicago and Los Angeles.

▲ For more details circle NED-985 D on enclosed inquiry slip ▲

New Processes & Materials

ALUMINUM PAINT
inhibits rust, withstands 1000° F

Resistance to temperatures up to 1000° F is inherent in Totalume, a protective aluminum finish that retains its high luster under adverse conditions. The rust inhibitive coating can be painted over damp or rusted surfaces on fences, tanks, standpipes, and other equipment. It is offered in ½-pt, 1-qt, and 1 and 5 - gal containers. • **Wilbur & Williams Co.**, 650 Pleasant St., Norwood, Mass.

▲ For more details circle NED-986 D on enclosed inquiry slip ▲

POLYETHYLENE TUBING
offered in ¼ to ½-in. diameters

Strong, tough, and lightweight Parker-POL polyethylene tubing is easily installed without special tools and is cut with sharp knife or shears. Its flexibility brings about savings in installation time and labor. Tubing connected with brass or aluminum Intru-lok fittings, or with Stainless steel Ferulok fittings forms joints which withstand severe vibration and major tube movement. The chemical, cold, and aging resistant tubing is offered in four sizes: ¼ in. diameter by 0.040-in. wall thickness; 5/16 x 0.062 in.; ⅜ x 0.062 in.; and ½ x 0.062 in. • **Parker-Hannifin Corp.**, Parker Fittings & Hose Div., 17325 Euclid Ave., Cleveland 12, Ohio.

▲ For more details circle NED-987 D on enclosed inquiry slip ▲

POLYESTER-COATED WIRE
has high resistivity

Moleculoy ultrafine, high resistivity wire is available with a coating of high temperature terephthalic acid polyester enamel. Abrasion resistant coating allows wire winding on conventional and automatic resistor winding equipment. High dielectric strength enables it to withstand 400 v without pin-hole breaks. Heat resistance is above 270° C. Wire itself is a nickel-base, nonmagnetic, 800-ohm alloy, and is made in 0.0004 to 0.010-in. diameters. It can be soldered, brazed, or welded. • **Molecu-Wire Corp.**, Scobeyville, N. J.

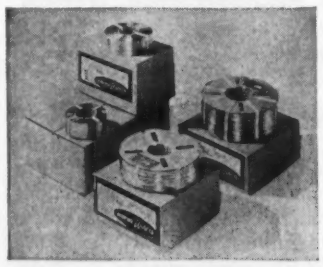
▲ For more details circle NED-988 D on enclosed inquiry slip ▲

PLASTIC FOAM MATERIAL
in 2 to 25-lb per cu ft densities

Among many industrial uses for Vultafoam rigid and semirigid urethane prepolymers are insulation of refrigeration cabinets, flotation for boats, void filler, and packaging or cushioning material for perishable goods and delicate instruments. The freon gas blown material is available in densities ranging from 2 to 25 lb per cubic foot. It has no shrinkage and fine cell structure with 90 to 95 per cent closed cells. Foam time is from 2 to 5 min; hardening time, 10-15 min. • **General Latex & Chemical Corp.**, 666 Main St., Cambridge, Mass.

▲ For more details circle NED-989 D on enclosed inquiry slip ▲

STITCHING WIRE
for box stitching applications



Because of its shape and strength, Econo-Stitch rounded - shape box stitching wire yields up to 22 more ft per lb than conventional wire, or a savings of up to 15 per cent. It is usable on any standard stitching machine, and it offers a smooth, scuffproof closure that will not mar corrugated box surfaces when handled or stacked. Wire is made in 0.017, 0.02, and 0.023 x 0.103 gages. • **Enterprise Wire Co.**, Blue Island, Ill.

▲ For more details circle NED-990 D on enclosed inquiry slip ▲

only **Koncentrik®** STAINLESS **PIPE UNIONS** *give you a* fully confined **TEFLON SEAL**

Patented construction provides double sealing action. Excellent for high pressure and high vacuum applications. Pressure ratings 2,000# to 6,000#. Screwed or socket weld ends, for pipe sizes to 2". Send for catalog today.

THE SPECIAL SCREW PRODUCTS COMPANY SSP
BEDFORD, OHIO

▲ For more details circle NED-991 D on enclosed inquiry slip ▲

ENGINEERED PACKINGS

Garlock LATTICE-BRAID* Packings are engineered for longer packing life. They employ a through-and-through braiding construction. Each strand passes diagonally through the packing at a 45° angle. This unique construction makes a completely unified structure, resulting in greater strength. Since there is no single outer braid to wear through, Garlock LATTICE-BRAID will wear far beyond the limits of ordinary packings. Applicable against water, steam, oil, gases and chemicals to 700° F. Available in asbestos, flax, cotton and Teflon†. Only Garlock can give you LATTICE-BRAID.

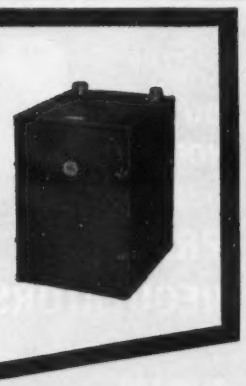
Call the nearest of our 26 sales offices throughout the U.S. and Canada. Or, write for Catalog AD-131. The Garlock Packing Company, Palmyra, New York.

GARLOCK

Canadian Div.: The Garlock Packing Company of Canada Ltd.
Plastics Div.: United States Gasket Company.
Order from the Garlock 2,000 . . . two thousand different styles of Packings, Gaskets, Seals, Molded and Extruded Rubber, Plastic Products.
*Registered Trademark
†Du Pont Trademark for TFE Fluorocarbon Resin

▲ For more details circle NED-992 D on enclosed inquiry slip ▲

how to trap dust *that damages your machines and hurts company morale*



Easy-to-move **TORIT** dust collectors trap dust at its source!

Untrapped dust costs money: "secretly" forces precision machines out of line, limits production. Torit dust collectors are unitized for custom installation—save more money, usually more efficient than central (built-into-building) system. Torit unit operates only when machine or combination of machines it protects are on. Filtered air may be returned to room to save heat. Many models and sizes, all self-contained, easy to move. Write today to . . .

TORIT *manufacturing co.*
Dept. 201, 1133 Raskin St., St. Paul 16, Minn.

▲ For more details circle NED-993 D on enclosed inquiry slip ▲

XCELITE, INC. ORCHARD PARK, N. Y.

XCELITE Canada: Charles W. Pointon, Ltd., Toronto, Ont.

INDUSTRIAL HAND TOOLS

▲ For more details circle NED-995 D on enclosed inquiry slip ▲

HOW MUCH IS half a furnace WORTH?

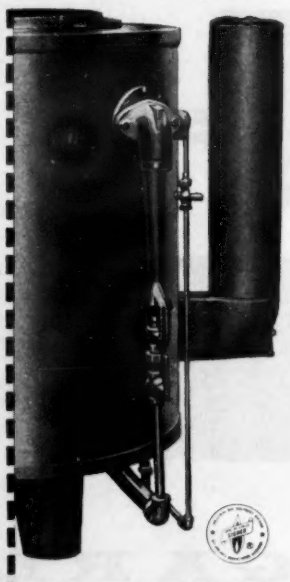
BUZZER REG. U.S. PAT. OFFICE

INDUSTRIAL FURNACES using only low pressure gas give you Full-Value, Fully "Packaged" Venturi Units for every metal working service.

NO BLOWER NEEDED
NO ELECTRICAL POWER
JUST CONNECT TO GAS SUPPLY

Why buy half a furnace? When you uncrate an ordinary unit, you get something like a car without the engine. You need in addition: 1. a costly blower, tools, electrical and other installation contractors, plus maintenance; 2. electrical power, wiring, transformers, surge controls; 3. shop noise suppressors and special remote locations; 4. extra safety precautions due to complex heating systems.

When you specify "BUZZER", you get the whole "packaged" furnace, all ready to connect to your gas supply, all ready to operate. "BUZZER" modern, gas-fired heat treating and melting furnaces give you the quietest, most reliable metal working units available . . . operative during power shut-downs . . . completely self-contained, nothing to add except the profits from increased production and savings from maintenance-free operation. Standard and special furnaces available.



COMPLETE LINE OF "BUZZER" BURNERS FOR CLEANING, RINSING, PICKLING AND OTHER HEAT APPLICATIONS

Write Today for Complete "BUZZER" Catalog No. 1570A

CHARLES A. HONES, INC.
BAldwin 3-1110 — Established 1911
157 SOUTH GRAND AVENUE, BALDWIN, L. I., N. Y.
"BUZZER" Burners & Furnaces for Heat Treating, Melting, Soldering

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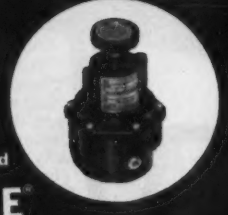
DO YOU USE PRESSURE REGULATORS

SEND FOR NEW FREE CATALOG ON KENDALL® and GOVERNAIRE®



Catalog gives performance and other data on 18 models of precision pneumatic pressure regulators. (pipe sizes 1/4" to 3/4" NPT)

STRATOS®
A DIVISION OF FAIRCHILD ENGINE & AIRPLANE CORPORATION
INDUSTRIAL PRODUCTS BRANCH
West Babylon, L. I., N. Y.

▲ For more details circle NED-997 D on enclosed inquiry slip ▲

New Literature & Catalogs

V-Belt Drives

T. B. Wood's Sons Co.—36-pages of information on the Ultra-V drive are found in illustrated Bulletin 9102. Drive is said to reduce over-all dimensions up to 50 per cent, and realizes savings in weight and cost, over conventional V-belt drives. Drive-selection tables, horsepower tables, and specifications are included.

▲ For more details circle NED-998 D on enclosed inquiry slip ▲

Industrial Plastics

Polymer Corp.—Properties, applications, and availability of Polypenco nylon, Teflon, Fluorosint TFE base resin, and other new industrial plastics are outlined in 16-page bulletin. Nylaflow nylon tubing and braided hose, Nylasint sintered parts, Nylatron molding powders, and Whirlclad coating system are covered.

▲ For more details circle NED-999 D on enclosed inquiry slip ▲

Electric Tachometers

Madison Electric Products, Inc.—Nine tachometer indicators and six electric generators for tachometer service are detailed in 4-page folder which covers speed measuring with this equipment. The new fan-style, long-scale, switchboard type indicator is recommended where speed observations are critical.

▲ For more details circle NED-1000 D on enclosed inquiry slip ▲

Tube Fitting Data

Imperial Brass Mfg. Co.—Prepared primarily as an engineering reference, 4-page Catalog 3108 contains a wealth of technical data on the Hi-Seal butt-joint fitting line. Over 250 styles and sizes are covered. Fittings afford the advantages of a brazed fitting with convenience of a make-and-break joint. Sections cover pressure, vacuum, temperature, vibration, corrosion resistance, port seals, flow, and velocity characteristics.

▲ For more details circle NED-1001 D on enclosed inquiry slip ▲

Stopwatch Buyer's Guide

Heuer Timer Corp.—16-page stopwatch buyer's guide facilitates proper selection from 66 improved stopwatch styles. In addition to the familiar 60-sec/revolution models, gearings for 100, 36, 30, 10, 6, 3.6, and 3 sec/revolution are offered, with different combinations of slide, side-button, and crown actuation. Split-action timers with two overlapping sweep hands are shown.

▲ For more details circle NED-1002 D on enclosed inquiry slip ▲

Gaging Systems & Components

"Sheffield Precisionaire Gaging" is title of 50-page handbook No. SPG-160 which describes in nontechnical language how to select the right amplification for a gaging job, when to use long-range air gages, and principles of air-gaging inside diameters, outside diameters, and other geometrical conditions. Choice of single or multiple column Precisionaire instruments in a full range of amplifications up to 100,000 to 1 is offered. Write on letterhead to Sheffield Corp., Box 893, Dayton 1, Ohio.

▲ For more details circle NED-1003 D on enclosed inquiry slip ▲

Drafting on Mylar Film

J. S. Staedtler, Inc.—Brochure reports experiences of engineering firms using the Mylar-Duralar drafting method. It demonstrates the correct technique for drafting with Duralar pencils on Mylar film. Drawings are tearproof, smearproof, easy to revise, and waterproof. They can be washed before prints are made.

▲ For more details circle NED-1004 D on enclosed inquiry slip ▲

Storage Racks

Artco Corp.—The Rak-A-Tier Tube-Rak storage rack described in 4-page bulletin combines the strength and stress resistance of the "perfect column," plus such functional features as shelf connectors, drop-in shelf members, and simplicity of erection. Upright frame specifications and shelf capacities are given.

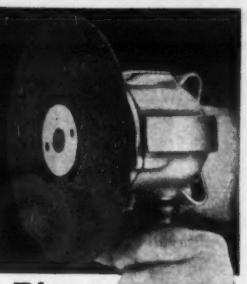
▲ For more details circle NED-1005 D on enclosed inquiry slip ▲

Metals Photomicrography

"Photomicrography of Metals" is a 46-page how-to reference guide for metallurgists which also serves as a short course in photomicrography. Major sections cover the metallographic microscope, illumination, filters in metallography, photographic materials, exposure determination, and processing and printing. Optics relative to the subject are discussed at length. Available for 50 cents, plus 10 cents for handling, from Eastman Kodak Co., Sales Service Div., 343 State St., Rochester 4, N. Y.

▲ For more details circle NED-1006 D on enclosed inquiry slip ▲

Cool Cutting!



SPITFIRE Grinding Discs

Cool, Clean Cutting Action makes use of the entire surface area of Aluminum Oxide Discs . . . speeds up the toughest grinding and sanding operations . . . adds extra life to Spitfire Discs for real job-after-job economy!

Tougher and Safer, Too! Spitfire Discs feature built-in barrier protection plus reinforced edges to stop limpness and excessive grit loss . . . need less pressure and fewer passes . . . actually provide a **25% greater safety margin** for smoothing away snags and hang-ups!

All Types, All Sizes! Available in "Special," "Standard," and "Heavy Duty" discs for every type of job from light gauge metal sanding and polishing to high speed finishing operations. Grit sizes 16 through 180. Disc diameters include 6", 7", 8" and 9 1/8" with 1/2" and 7/8" arbor holes.

Write for "Spitfire" folder today!

JEWEL BRAND

COATED ABRASIVES

Belts • Rolls • Sheets • Discs • Specialties

ABRASIVE PRODUCTS, INC.
South Braintree 85, Massachusetts

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No Finer Equipment for MEASURING FLATNESS
EASIER . . . MORE ACCURATELY

LAPMASTER OPTICAL FLATS

Available in certified optical accuracies of .000002" or .000001" ...in either clear fused quartz or Pyrex glass . . . either double or single surfaced . . . in a full range of standard sizes from 1" through 12" dia.

THE LAPMASTER MONOCHROMATIC LIGHT

Powerful helium lamp (40 candle-power) for sharp reading . . . light head adjustable for best reading angle; or swing completely around for tall parts . . . portable in self-contained case.

Write for complete details and measurement chart.

Lapmaster DIVISION

CRANE PACKING COMPANY
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MORTON GROVE, ILL. (*Chicago Suburb*)
In Canada:
Crane Packing Co., Ltd., Hamilton, Ont.

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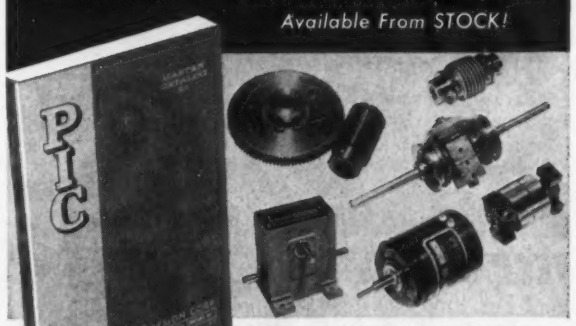
FREE 416-PAGE PIC MASTER CATALOG #21

Lists over 12,000 PRECISION INSTRUMENT PARTS and ASSOCIATED COMPONENTS

Available From STOCK!

Completely illustrated, with detailed drawings, specifications and prices.



GEARS • SHAFTS • COLLARS • CLUTCHES • BEARINGS • COUPLINGS • DIFFERENTIALS • SPEED REDUCERS and many other Precision Engineered Parts & Components.

Send for your FREE copy today.

PIC DESIGN CORP.
Subsidiary of BENRUS WATCH COMPANY, Inc.
477 Atlantic Ave., East Rockaway, L.I., N.Y.

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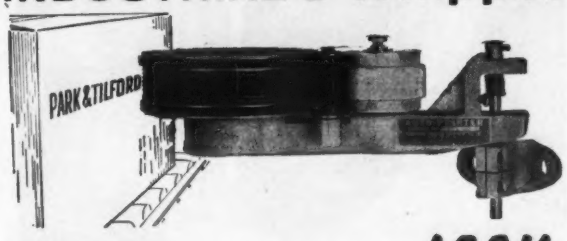
NO. 1 SPECIALIST IN THE MARKING FIELD INDUSTRIAL'S Whippet



What Makes it First?... LOOK:

Versatility . . . automatically imprints cartons, bags, rolls, cans, containers and packages — as you need them during production line runs.
Low cost . . . "Whippet" sells low, seldom requires attention or maintenance.
Capacity . . . works non-stop at production lines speeds. No misses or overprints.
Simple Operation . . . attaches quickly and easily direct to conveyor line; non-oscillating friction head uses interchangeable rubber type for clear, legible impressions.
Saves . . . expensive hand stencilling, pre-printing, storage and inventory costs.

Proved practical and economical on almost any marking problem — in plants all over the country — "Whippet" is so simple, well designed and manufactured that experience proves they serve faithfully and profitably far beyond ordinary equipment. See how they can improve your operation.

Write for details and catalog today! Dept. NED

ime INDUSTRIAL MARKING EQUIPMENT company, Inc. 655 BERRIMAN ST. BROOKLYN 6, N.Y. NI 9-3305

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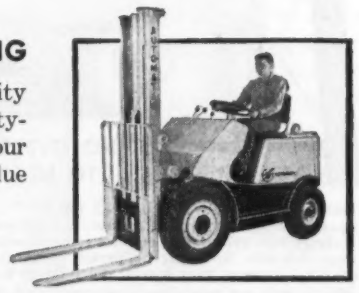
A NEW HIGH...IN VALUE A NEW LOOK...IN STYLING A NEW LOW...IN PRICE

VALUE PLUS—Automatic's simplified power package gives high operating efficiency, low cost of operation, maximum safety. A gas engine and variable voltage generator, precisely matched, supply exact power. No troublesome clutch or hydraulic torque converter.

PLUS VALUE FEATURES—Operates on 25% to 35% less fuel. 50% longer hydraulic pump life. Oversize brakes last up to 30% longer, adjust without removing wheels. Longer-life, advanced design roller-mounted uprights. Ventilated exhaust dispels fumes. New 3-way adjustable seat increases driver efficiency, reduces fatigue.

MODERN STYLING



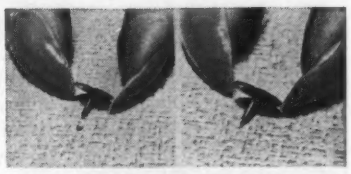
Special high visibility orange adds a safety-plus feature to your plant. New royal blue accentuates truck's low center of gravity and high stability.

PRICE IS RIGHT—Not a premium-priced truck, but priced competitively with trucks using hydraulic torque converters. For further information write to: Automatic Transportation Company, Division of The Yale & Towne Manufacturing Company, 61 West 87th Street, Dept. D-0, Chicago 20, Illinois.

▲ For more details circle NED-1011 D on enclosed inquiry slip ▲

New Processes & Materials

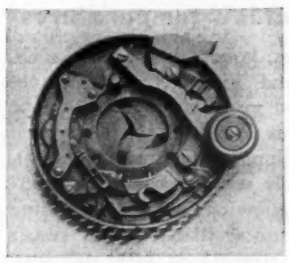
VINYL-CORK WALL COVERING tack punctures are "self healing"



Punctures in Cork-Tex wall covering from tacks, pins, and nails "heal" instantly to leave the surface unblemished. This decorative vinyl-on-cork material is intended for conference room displays, office communication, wall displays, and many similar applications. It can be used to cover entire walls, wall sections, or to replace mutilated bulletin boards, and is durable and washable. Product is offered in 4-ft wide, 72-ft long rolls and in preframed sections up to 12 ft long. More than 100 shades and textures are available in addition to a selection of eight colors in the linen finish vinyl. It is applied to wall with mastic adhesive. ● **Continental Can Co.**, Bond Crown & Cork Div., 1819 N. Major Ave., Chicago 39, Ill.

▲ For more details circle NED-1012 D on enclosed inquiry slip ▲

RESIN-BONDED FILM LUBRICANT is spray, dip, or brush applied



Extensive and costly surface preparation is not necessary before applying Poxylube 42 resin bonded film lubricant for bearing surfaces subject to temperature extremes and pressure. Applied to metals, glass, or plastics by spray, dip, or brush, lubricant exhibits high resistance to wear and contamination. Although formulated for use without curing, solvent resistance and hardness of the lubricant can be increased by baking at moderate temperatures. Adhesion is unaffected by flexing, and film withstands fuels and solvents. Because film is dry, it will not pick up dust or become gummy. Picture shows camera shutter mechanism, parts of which are permanently lubricated with Poxylube 42. ● **General Devices Co.**, Poly Chem Div., 541 S. Webster Ave., Indianapolis 19, Ind.

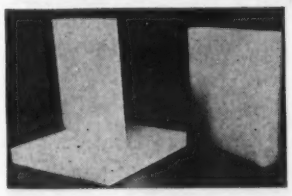
▲ For more details circle NED-1013 D on enclosed inquiry slip ▲

RESISTOR ALLOY is rated 800 ohms per cmf at 20° C

Uniform physical, electrical, and mechanical properties are inherent in modified 80-20 Type nickel-chromium Chromel-R alloy for use in precision wire wound resistors, potentiometers, and other electric components. Electrical resistivity is 800 ohms cmf at 20° C with a low controlled temperature coefficient over an operating range of −65 to 150° C. It also possesses high strength, good ductility, and resistance to wear and corrosion. It is precision drawn to standard wire sizes from 0.0031-in. or 40-gage down to 0.0004-in. diameter. ● **Hoskins Mfg. Co.**, 4445 Lawton Ave., Detroit 8, Mich.

▲ For more details circle NED-1014 D on enclosed inquiry slip ▲

POLYPROPYLENE BLOCK easily machined for prototype use



Polypropylene in block form can be machined, threaded, and welded with standard woodworking or machine tools for creating prototypes for in-field testing or ultimate customer approval. Typical uses include bearing material, pillow blocks, appliance housings, valves, automotive parts, and laboratory and hospital ware. Material has excellent impact resistance and withstands temperatures to 240° F under average service load conditions. Block sizes range from 1 x 12 x 12 in., weighing 4.7 lb, to 3 x 12 x 12 in., weighing 28.2 lb. Prices range from $11.75 to $63.45 per block. ● **American Agile Corp.**, Box 168, Bedford, Ohio.

▲ For more details circle NED-1015 D on enclosed inquiry slip ▲

Completely Modern...the new

MULTI-CLEAN FLOOR MACHINE

● Sleek . . . elegant . . . rugged . . . and a champion in performance. These exciting and versatile new MULTI-CLEAN models have features not available in other machines. *For example:*

Detachable 3-conductor cable fits recessed twist-lock receptacle . . . dual switch controls may be operated by either hand . . . bumpers circle both base and top . . . capacitor-start, induction-run motor reaches full operating speed almost instantly . . . all ball bearinged gear unit . . . fully adjustable handle . . . big wheels.

14", 16", and 22" MULTI-CLEAN Floor Machines are similar to 19" model shown here. Lite-12, 31", and Explosion-proof Models also available.

It will pay you to investigate savings and other advantages you'll enjoy when you own a MULTI-CLEAN Floor Machine. See your Distributor or write MULTI-CLEAN *today.*

MULTI-CLEAN Method

MULTI-CLEAN PRODUCTS, INC.
Dept. NE-65-40, 2277 Ford Parkway, St. Paul 16, Minn.

▲ For more details circle NED-1016 D on enclosed inquiry slip ▲

R-W FUSIBLE LINKS for FIRE DOORS & WINDOWS

...constant protection against the menace of fire!

- Available in a wide range of types and sizes.
- Available with standard "break-away" temperatures of 160°, 212°, 286°, and 360°... also made with any special "break-away" temperature you desire.
- Links carry up to 25 lb. loads... available in double, triple and quadruple link assemblies to carry loads up to 100 lbs.
- R-W Fusible Links are Underwriters and Factory Mutual Laboratories Approved.

R-W Fusible Links provide a constant guardian against the spread of fire... always ready to release fire blocks at the first sign of excessive heat. Ideal for fire doors, windows, hoods, hatchways, ventilation fans, etc. Economical to buy and install... especially economical when you consider that a fusible link could prevent thousands of dollars worth of damage. Write today for Brochure No. F-184.

R-W FIRE DOORS & HARDWARE... Underwriters and Factory Mutual Laboratories Approved for Class A, B, C, D, E, and F openings. Quickly and easily installed... provides 24 hour a day protection... lowers your insurance rates. Write today for Catalog No. 420.

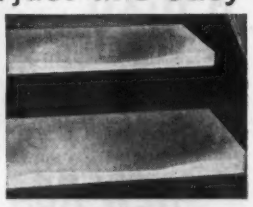
RICHARDS-WILCOX MFG. CO.
435 W. Third Street • Aurora, Illinois • Branches in Principal Cities

▲ For more details circle NED-1017 D on enclosed inquiry slip ▲

HOW TO *SAFETY-IZE WORN STAIRS.. just this easy

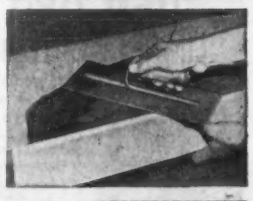
Restore slippery dangerous stairs in a few hours with

*** SUPER STAIRMASTER**

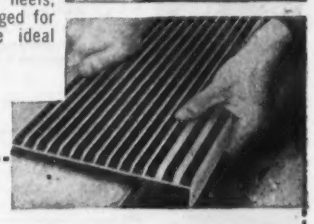


the new heavy duty aluminum safety tread that solves commercial, industrial, institutional stair problems this fast –

1. For 'dished' wood, concrete, marble, slate, etc. stairs
2. Simply level tread area with plastic compound
3. Apply Stairmaster — and stair is ready to use



Abrasive 'Traffic-Flow' design has magnetic-like grip for safe, sure traction even under wet or oily conditions. Safety for ladies' high heels, easy to sweep or vacuum, rugged for long wear — Stairmasters are ideal for busy stairs.



WOOSTER PRODUCTS Inc.
S-16 Spruce St.
WOOSTER, OHIO

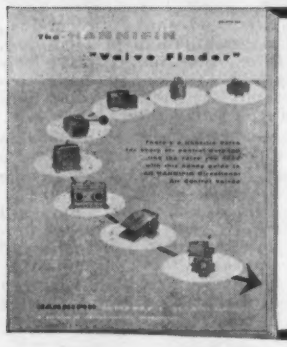
APPROVED & RECOMMENDED BY SAFETY ENGINEERS

GUARANTEED BY WARRANTY BOND

Get full details on stair repair
Company_____
Address_____
City_____ State_____
S-16 Name_____

▲ For more details circle NED-1018 D on enclosed inquiry slip ▲

NOW! Flow capacities in the "Valve Finder"



Put an end to costly oversizing ...get your new HANNIFIN 12-page guide to valve selection

Now you can select the right air valve for any application ...quickly...confidently. Every valve is identified and defined simply and concisely in this new booklet. And C_V capacity coefficients for all directional air control valves listed are included to guide you in your selection of proper valve size.

Be your own valve expert. Write for this new "Valve Finder". It's free.

HANNIFIN COMPANY
527 South Wolf Road • Des Plaines, Illinois
A DIVISION OF PARKER-HANNIFIN CORPORATION

For more details circle NED-1032 D on enclosed inquiry slip

High Accuracy Gages for High Vacuum

by Kinney®

Now you can KNOW the pressures in your Vacuum System with greater assurance ...KINNEY High Vacuum Gages not only give you accurate readings, they give them to you *faster* and *easier*. The KINNEY Compensated Thermocouple Gage covers the range from 3000 to 1 micron. The GICT Ionization-Thermocouple Gage—from 3000 microns to 10^{-7} mm Hg.

WRITE FOR THESE BULLETINS TODAY

3800.1 Compensated Thermocouple Gage
3811.1 Ionization-Thermocouple Gage
4510 Metallurgical Furnace Bulletin

KINNEY VACUUM DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612D WASHINGTON STREET • BOSTON 30 • MASS.

For more details circle NED-1033 D on enclosed inquiry slip

BEST BUY IN 2-WAY RADIO!

NEW RCA "Low Drain" Transistorized Mobile Unit

MAIL COUPON FOR FURTHER INFORMATION

RADIO CORPORATION OF AMERICA
Communications Division, Dept. F-329
Building 15-1, Camden, N. J.
In Canada: RCA VICTOR Company Limited, Montreal

☐ Please send me FREE literature on the new RCA Transistorized "LD" Mobile Radio.
☐ RCA "Personaflone" belt type receiver and transmitter.
☐ Have RCA Communications Specialist contact me and explain today's best values in 2-way radio.

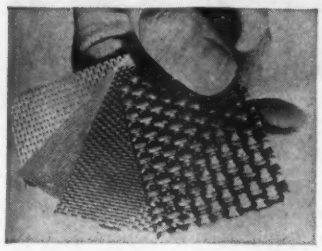
NAME_____ TITLE_____
COMPANY_____
TYPE OF BUSINESS_____
ADDRESS_____
CITY_____ ZONE____ STATE____

RCA **RADIO CORPORATION of AMERICA**
COMMUNICATIONS DIVISION
CAMDEN, N.J.

For more details circle NED-1034 D on enclosed inquiry slip

New Processes & Materials

PIERCED METAL SHEET for screening, dewatering uses



Conidure pierced metal sheet affords up to three times longer life than conventional materials in screening, recovering, or dewatering of coal, aggregate, food products, chemicals, and similar solids-bearing liquids. Carbon steel, stainless steel, copper, brass, or aluminum sheet pierced with trapezoidal holes have high throughput efficiencies. Sheet thickness can be up to seven times hole diameter which ranges from 0.004 to 0.099 in. Working side, available in several degrees of smoothness, has humps that act in shovel-like fashion to guide material to the openings. Pierced metal is available in sheets up to 31 in. wide, or formed in sheared shapes, cones, segments, and cylinders. • **National-Standard Co.**, Cross Perforated Metals, Carbondale, Pa.

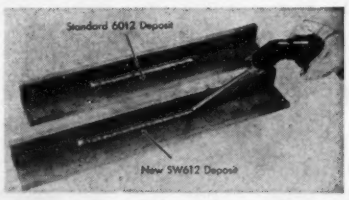
For more details circle NED-1035 D on enclosed inquiry slip

MOLDING PLASTISOL remains flexible at low temperatures

Bellows, grease boots, sleeves, hoods, dust covers, seals, visors, convoluted tubes and intricately shaped objects are typical of molded products which can be made from No. 9225 Denflex Plastisol. It lends itself to low-cost production by dipping and fusion by heat. Finished product is extremely wear resistant and flexible at low temperature, allowing repeated bending and stretching. It has a rubber-like feel and resists gasoline and oils. Tensile strength is 1400 psi, ultimate elongation is 500 per cent, and flex temperature is −65° F. Heat stability for 15 min at 400° F is excellent. Liquid is packed in 5-gal pails and 55-gal openhead drums. • **Dennis Chemical Co.**, 2701 Papin St., St. Louis 3, Mo.

For more details circle NED-1036 D on enclosed inquiry slip

WELDING ELECTRODE has minimum of spatter loss

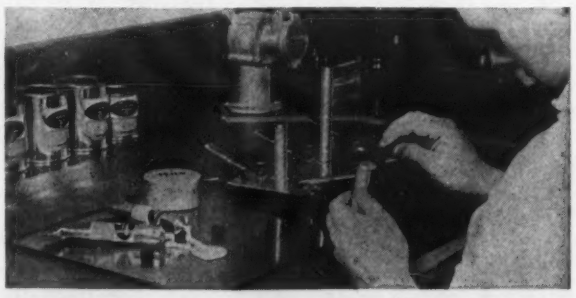


High rutile type SW 612 general purpose mild steel welding electrode is suited for heavy or high speed production operations where fit-up is poor. It cuts spatter loss of conventional E 6012 electrodes up to 60 per cent. Deposition efficiency is increased 15 per cent at high currents. Electrode affords high crack resistance with a high crowned convex bead, and also minimizes slag removal and cleaning time. It makes an attractive bead where appearance is important. • **A. O. Smith Corp.**, Welding Products Div., 3533 N. 27th St., Milwaukee 1, Wis.

For more details circle NED-1037 D on enclosed inquiry slip

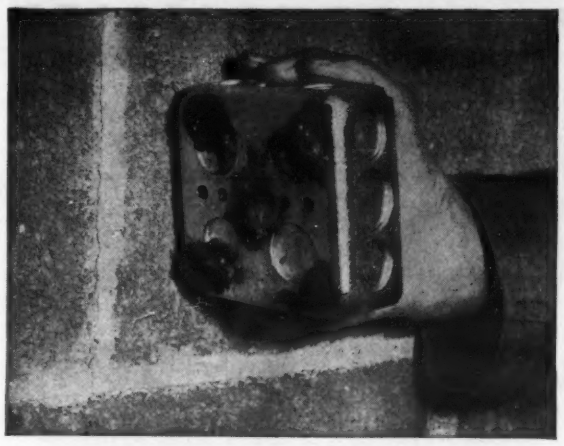
TWO-PART ADHESIVE for metals, glass, wood, plastics

Versatility in fabrication of metals, glass, wood, thermosetting plastics, and hard or vulcanized rubber is afforded by Stabond EP-110 two-part adhesive. It con-



sists of a blue-colored paste and a yellow-tinted hardener, both packaged in 2-oz squeeze tubes. Equal lengths are squeezed from each tube onto a clean, dry surface, then mixed until a uniform light green color is achieved. Advesive will cure at room temperatures, or can be oven heated for rapid setting. It is also available in bulk quantities. • **American Latex Products Corp.**, 3341 W. El Segundo Blvd., Hawthorne, Calif.

For more details circle NED-1038 D on enclosed inquiry slip



New Permacel Junction Box Mount epoxy adhesive

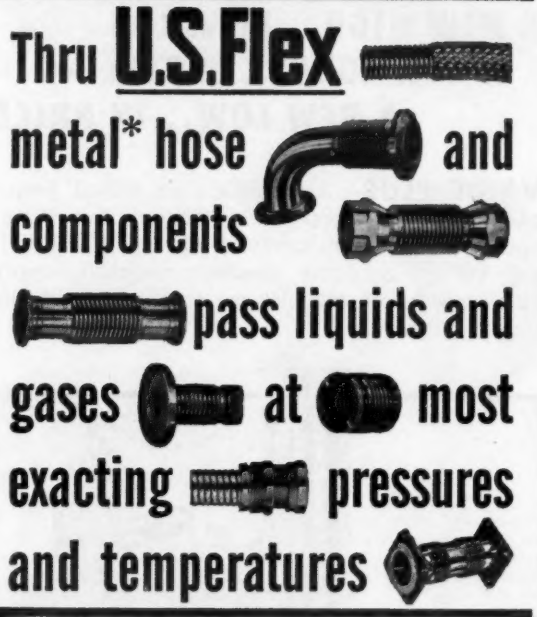
... the fast, easy way to attach junction boxes to any surface

PERMACEL

NEW BRUNSWICK, NEW JERSEY
TAPES • ELECTRICAL INSULATING MATERIALS • ADHESIVES

For more details circle NED-1039 D on enclosed inquiry slip

Thru U.S.Flex metal* hose and components pass liquids and gases at most exacting pressures and temperatures



*STAINLESS *BRONZE *STEEL
Write Our Engineering Staff for Free Consultation on Your Problems ...

U.S. FLEXIBLE TUBING CO.
215 MAIN STREET BARTLETT, ILLINOIS

For more details circle NED-1040 D on enclosed inquiry slip

TROPICAL DRI-SPRAY ALUMINUM

NO OVERSPRAY DAMAGE TO NEARBY SURFACES

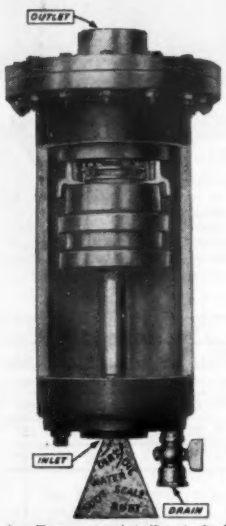
NOW, SPRAY PAINT INDOORS OR OUT ... FAST! Tropical Dri-Spray Aluminum coats and protects metal, wood, concrete and plaster surfaces with speed and complete safety. Overspray dries to harmless dust as it falls. No danger to parked cars, adjoining buildings.

ONE MAN DOES THE WORK OF THREE! With Dri-Spray, each pass with a spray gun puts a new coat over a coat that has dried an instant before ... builds desired mil thickness quickly, easily. Move ladders and scaffolding only once. Dri-Spray Aluminum gives heavy-duty, long-lasting protection. For fast, economical, safe spray painting... specify Tropical Dri-Spray Aluminum. Write for complete information, today!

TROPICAL PAINT COMPANY
1124-1292 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

For more details circle NED-1041 D on enclosed inquiry slip

END AIR LINE MOISTURE PROBLEMS!



get the
CLEANEST, DRIEST
compressed air!

No more air line freezups with the CMD Textite Separator. *No* moving parts, *no* filters make Textite virtually maintenance-free. Use this proven separator to prevent rust, washing out of lubricants, worn gaskets, scored cylinder walls, clogged nozzles and costly equipment repair. Especially effective for keeping paint and finishing lines dirt and moisture-free.

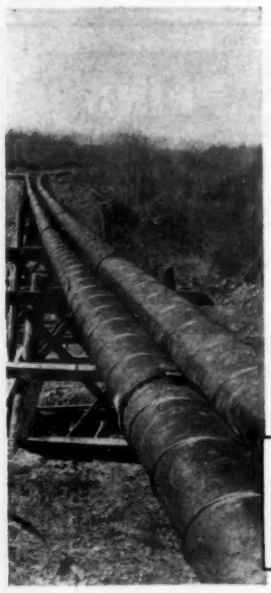
NO MOVING PARTS . . . NO FILTERS TO REPLACE!

SEND FOR CATALOG...

Contains complete details, all essential ordering information. Send for your copy today!

CHICAGO MANUFACTURING & DISTRIBUTING CO.
1902 W. 46th St. • Chicago 9, Ill.

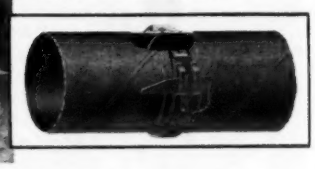
▲ For more details circle **NED-1042 D** on enclosed inquiry slip ▲



NAYLOR...
The Economical Steel Pipe

Pipe sizes from 4" to 30" in diameter in a wide range of wall thickness. NAYLOR Spiralweld steel pipe . . . easy to handle and install with built-in strength and safety. Suitable for most industrial applications.

For connecting NAYLOR pipe, all types of flanges and mechanical couplings are available in addition to the NAYLOR Wedgelock coupling illustrated. This positive coupling anchors securely to pipe ends. A hammer is the only tool required to connect or disconnect it.



Write for Bulletin No. 59 for data on pipe, fittings and connections.

NAYLOR PIPE *Company*

1247 E. 92nd St., Chicago 19, Illinois

Eastern U.S. and Foreign Sales Office:
60 East 42nd Street, New York 17, N. Y.

▲ For more details circle **NED-1043 D** on enclosed inquiry slip ▲

New Processes & Materials

THERMAL INSULATING CEMENT
is castable, quick-set type

Hard-to-cover materials such as glass fiber board and blanket, rock cork board, foam glass block, and rock wool blanket can be covered with Thermold Hard Finish quick-set, one-coat thermal insulation cement. Product can be packed by hand, troweled, injected, palmed, sprayed, or poured to any thickness. It withstands freezing, is noncorrosive to metals, will not shrink or blister, and gives a smooth hard finish. Premolded jackets for pipe fittings can be made in two pieces. Set or dried material is re-usable. • **Thermold Products Co.**, Grandview, Mo.

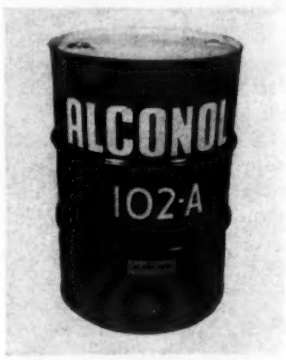
▲ For more details circle **NED-1045 D** on enclosed inquiry slip ▲

RESISTANCE ALLOY WIRE
for 250° C continuous operation

Combination of a ceramic undercoating with an overlay of Teflon imparts good mechanical and electrical properties to this resistance alloy wire. Dual layer Ceron insulation enables the wire to operate continuously at 250° C and up to 300° C for short periods. Surface has a slick self-lubricating finish, and the light gray color makes it easy to see in fine gages. Insulation is available on Kanthal DR iron-based alloy, plus several Nikrothal alloys in diameters from 0.001 to 0.0045 in. • **Kanthal Corp.**, Amelia Place, Stamford, Conn.

▲ For more details circle **NED-1046 D** on enclosed inquiry slip ▲

RUST PREVENTIVE
protects steel, tin plate, brass



Steel, tin plate, brass, aluminum, and other metals are protected from corrosion for several months of outdoor exposure to several years in protected indoor storage by Alconon 102-A rust preventive. Compound is brush, spray, dip, or roller applied and dries to a hard, nontacky surface which will not pick up dust, grit, and dirt, nor rub off during handling. Clear, thin, and practically invisible film dries in 20 to 30 min at room temperature, or can be oven dried in 2 min at 200° F. Product protects by inhibition, is nontoxic, and contains no metallic driers. Flash point is 105° F. • **Al-Con Chemical Co.**, Box 8168, New Orleans 22, La.

▲ For more details circle **NED-1047 D** on enclosed inquiry slip ▲

Model 30 (less Jet Air Gun) also available

CLEAN AUTOMOTIVE & INDUSTRIAL PARTS
3 WAYS!
1. Continuous Flow Hose
2. Air Agitated Soaking Tank
3. "Super Power" Jet Air Gun

A must in every service shop!

Kleerflo SUPER **CLEANMASTER** MODEL 50

The safe and sane way to clean parts! Suggested Cleaning Compounds: Kleerflo Hi-T Degreasol—Fast drying leaves no film or Kleerflo Hi-T M467—Penetrating—leaves film that prevents rust.

WASH AN ENTIRE ENGINE BLOCK OR 300 LBS. OF PARTS... FAST!

Kleerflo POWERMASTER DEGREASER

AUTOMATIC
HOT TANK
POWER AGITATED

REDUCE OPERATING COSTS!
Write for Literature, Dept. G-4

America's Foremost Producer of Parts Cleaning Equipment
PRACTICAL MFG. CO.
2840 4TH AVE. S. • MINNEAPOLIS, MINN.

▲ For more details circle **NED-1048 D** on enclosed inquiry slip ▲

New Way to Stop Faucet Leaks!

★ **9-in-10 washers are fastened with TOO LONG or SHORT SCREWS thus loosen and destroy themselves. Leaks quickly follow!**

34 YEARS OF RESEARCH REVEALS NEW SOLUTION

★ **New, patented 'Sexauer' SELF-LOCK screws have imbedded expanding NYLON PLUG. They lock at required depth AUTOMATICALLY, hold washers firmly! Made of MONEL, they are rustproof, non-corroding. Heads can't twist off. Screw slots can't distort.**

★ **NEW, improved 'SEXAUER' EASY-TITE faucet washers are made of super-tough, pliable du Pont compound (not rubber or fibre). Reinforced with a vulcanized layer of Fiberglas, they resist distortion and splitting from shut-off grind and squeeze.**

★ **Faucet leaks repaired with 'Sexauer' EASY-TITE faucet washers and SELF-LOCK screws outlast ordinary repairs "6-to-1"!**

HIDDEN COSTS OF FAUCET LEAKS!

Hackensack, N. J. Water Co. and American Gas Association figures prove stopping just ONE PIN-HOLE SIZE (1/32") LEAK saves you 8,000 gal. water quarterly. A HOT WATER FAUCET LEAK repair saves you over $7.58 QUARTERLY in fuel and water bills. Fewer leaks also produce important savings on MATERIALS, LABOR and COSTLY FIXTURE REPLACEMENTS!

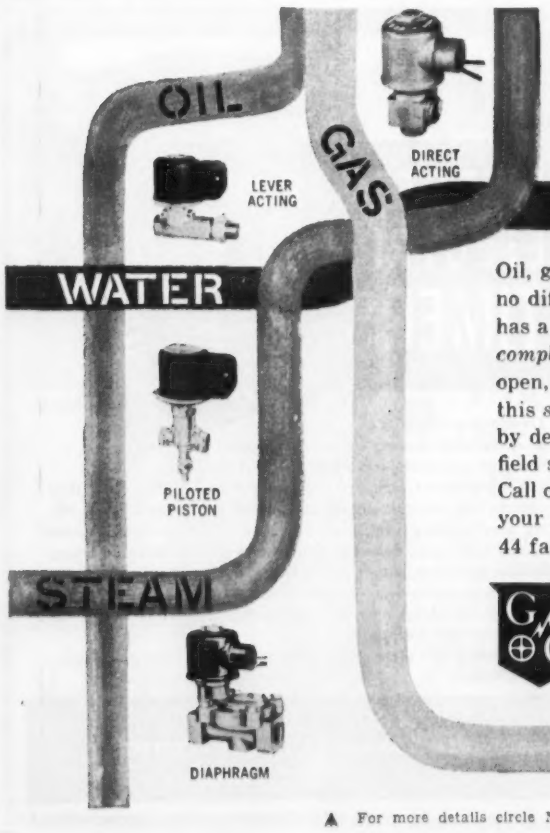
A 'Sexauer' Technician will make available our NEW Catalog, Edition "J", listing our entire line of over 3,000 TRIPLE-WEAR plumbing repair parts and tools. He will survey your fixtures, determine the repair parts needed and establish an efficient stock arrangement and control to prevent costly overstocking or shortages. You get this service without obligation. *Act now!*

J. A. Sexauer Mfg. Co., Inc., Dept. AU-40
2503-05 Third Ave., New York 51, N. Y.
Please send me a copy of your NEW Catalog "J"

Name_____ Title
Organization_____
Bus. Address_____
City_____ Zone____ State____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

▲ For more details circle **NED-1049 D** on enclosed inquiry slip ▲



if it flows...
THERE'S A GENERAL CONTROLS SOLENOID VALVE TO CONTROL IT!

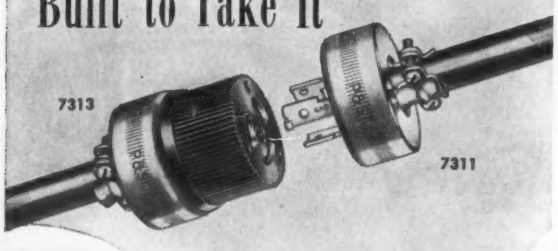
Oil, gas, water, steam, corrosive fluids, refrigerants–makes no difference what you're handling...General Controls has a solenoid valve to do the job. The General Controls line is *complete*...pressure range from 0 to 3000 psi in normally open, normally closed, shut-off, 3-way and 4-way valves. And this *single reliable source* can save you time and money... by delivering a quality product–backed by factory-trained field service representatives where and when you need them. Call on the man from General Controls for help in solving your automatic control problems. Nine plants... 44 factory branch offices at *your* service.

GENERAL CONTROLS
Automatic Controls for Product or Process
Glendale, Calif. · Skokie, Ill. · Guelph, Ontario, Canada
Nine Plants — 44 factory branch offices serving the United States, Canada and Western Europe

▲ For more details circle **NED-1044 D** on enclosed inquiry slip ▲

P&S TURNLOK

Built to Take It



P&S TURNLOK wiring devices are designed to give trouble-free service no matter how tough the going gets. TURNLOK devices are available in 10 and 20 Amperes, 2-, 3-, and 4-wire types: receptacles, connectors and caps.

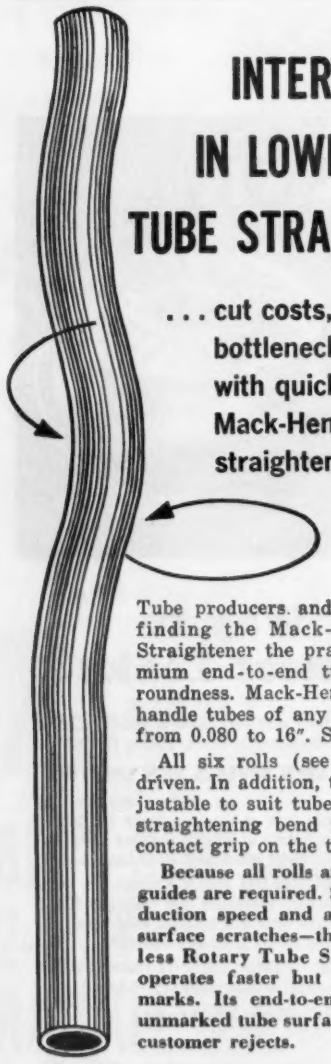
PERFORMANCE SPECIFIED

For information about P&S TURNLOK Line, write Dept. NED-46.

PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK

60 E. 42nd St., New York 17, N.Y. 1440 N. Pulaski Rd., Chicago 51, Ill. In Canada: Renfrew Electric Co., Ltd., Toronto, Ontario

▲ For more details circle **NED-1050 D** on enclosed inquiry slip ▲



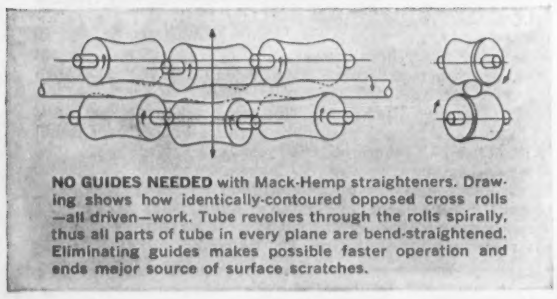
INTERESTED IN LOWER COST TUBE STRAIGHTENING?

. . . cut costs, delivery bottlenecks and rejects with quick, versatile Mack-Hemp rotary tube straighteners

Tube producers and processors alike are finding the Mack-Hemp Rotary Tube Straightener the practical answer to premium end-to-end tube straightness and roundness. Mack-Hemp straighteners will handle tubes of any alloy . . . in any O. D. from 0.080 to 16". Speeds up to 800 fpm.

All six rolls (see diagram below) are driven. In addition, the rolls are fully adjustable to suit tube diameter, amount of straightening bend required, and correct contact grip on the tube.

Because all rolls are driven, no interpass guides are required. Since guides limit production speed and are a major source of surface scratches—the Mack-Hemp Guideless Rotary Tube Straightener not only operates faster but also eliminates guide marks. Its end-to-end straightening, with unmarked tube surface, cuts inspection and customer rejects.



NO GUIDES NEEDED with Mack-Hemp straighteners. Drawing shows how identically-contoured opposed cross rolls—all driven—work. Tube revolves through the rolls spirally, thus all parts of tube in every plane are bend-straightened. Eliminating guides makes possible faster operation and ends major source of surface scratches.

For more information on specifications, dimensions, design data and typical examples of how leading tube producers and processors are using Mack-Hemp straighteners, write for 24-page bulletin "How to Straighten Pipe and Tube"

MACKINTOSH-HEMPHILL
Division of
E. W. BLISS COMPANY
901 Bingham Street • Pittsburgh 3, Pa.

▲ For more details circle **NED-1051 D** on enclosed inquiry slip ▲

New Literature & Catalogs

Weld Fasteners

Ohio Nut & Bolt Co.—Dimensional information on stocked weld nuts, weld screws, special purpose weld parts, and leg levelers are contained in 48-page illustrated Stock Parts Catalog 60. It also includes welding information, electrode data, and designs and weld setups for welding individual parts, plus illustrations and descriptions of typical applications.

▲ For more details circle **NED-1052 D** on enclosed inquiry slip ▲

Micro-Drilling

Dumore Co.—Techniques and equipment for micro-drilling holes with diameters from 0.001 to 0.020 in. are covered, along with drilling practices and problems, in 22-page technical "how to" manual. Suppliers of pivot drills, twist drills, and watchmakers' flat drills are listed.

▲ For more details circle **NED-1053 D** on enclosed inquiry slip ▲

Load Handling Equipment

Manning, Maxwell & Moore Inc., Shaw-Box Crane & Hoist Div.—Condensed Bulletin 15025-1C-59 lists overhead load handling equipment, including Budgit electric hoists, air hoists, chain blocks, and hoist accessories; Tugit lever operated hoists; Shaw-Box standard chain blocks; Load-Lifter electric and air-operated cable type hoists; and MMM lifting specialties.

▲ For more details circle **NED-1054 D** on enclosed inquiry slip ▲

Diesel Engine Maintenance

Cummins Engine Co.—"Ten Maintenance Steps" is title of manual which lists and describes exact procedures for obtaining optimum performance from diesel engines powering mobile and stationary equipment. This 24-page booklet contains excerpts from complete maintenance manual.

▲ For more details circle **NED-1055 D** on enclosed inquiry slip ▲

Glow-in-the-Dark Safety Paints

Switzer Brothers, Inc.—The dramatic gain in visibility obtained with Day-Glow fluorescent safety paint over conventional safety colors is demonstrated in 8-page brochure. Through use of a diagonal flap, the interior of a typical industrial plant is bisected to show actual comparison of Day-Glow and normal safety color on crane hooks, lift trucks, electric switches, fire extinguishers, railings, and signs. Typical safety uses of paint are shown.

▲ For more details circle **NED-1056 D** on enclosed inquiry slip ▲

Miniature Bearing Design

"Design and Purchasing Manual" is title of 140-page engineering guide to over 370 standard New Hampshire bearings from 1/10 to 5/8-in. OD. Included are 22 bulletins which discuss factors affecting bearing life and operation. Primarily designed for instrument and miniature ball bearing applications, bearings are made to precision tolerance. Dimensions, design features, and calculated load ratings for plain, flanged, shielded, and extended inner retainer types as well as special bearings are given. Write on letterhead to New Hampshire Ball Bearings, Inc., Route 202, Peterborough, N. H.

▲ For more details circle **NED-1057 D** on enclosed inquiry slip ▲

Stocked Electronic Components

Ohmite Mfg. Co.—32-page Catalog 30A gives complete dimensional and electric properties of Ohmite rheostats, potentiometers, resistors, relays, variable transformers, chokes, capacitors, and other electrical and electronic components that are available immediately from stock. Net prices are included on all items, each of which is shown and described.

▲ For more details circle **NED-1058 D** on enclosed inquiry slip ▲

Chain Hooks & Shackles

Midland Industries, Inc.—Two illustrated 2-page Data Sheets 538 and 525 are descriptive of high strength shackle grab and slip hooks, chain shackles, and safety anchors. Dimensions and ratings of these chain fittings are tabulated.

▲ For more details circle **NED-1059 D** on enclosed inquiry slip ▲

Aluminum Bronze Wear Strips

Meier Brass & Aluminum Co. — Two aluminum bronze alloys in extruded form for use as wear strips, wear plates, and other applications are subject of 6-page Bulletin "Meier Wearite." Properties of these materials which are available in sizes from 1/4 to 3 in. thick and 1 to 6 in. wide are given.

▲ For more details circle **NED-1060 D** on enclosed inquiry slip ▲

REVCO Sub-Zero Chests

- for shrink fits
- for seasoning gauges and tools
- for testing • for research
- for processing to −140°

Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to −30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to −95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to −85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as −140° F. 220V, 60 cycle, single phase.

Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers—no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range Rm. 70°	Temp. Range Rm. 110°	Outside Dim. L	Outside Dim. W	Outside Dim. H	Inside Dim. L	Inside Dim. W	Inside Dim. H
Sub-Zero	SZH153	1.5	−95° F.	−85° F.	42"	28"	42¾"	23"	9"	12½"
Sub-Zero	SZH653	6.5	−85° F.	−75° F.	60"	28"	42¾"	47"	15"	16"
Sub-Zero	SZHC657	6.5	−140° F.	−125° F.	60"	28"	42¾"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	−30° F.	−20° F.	42"	28"	41"	30"	16"	18"

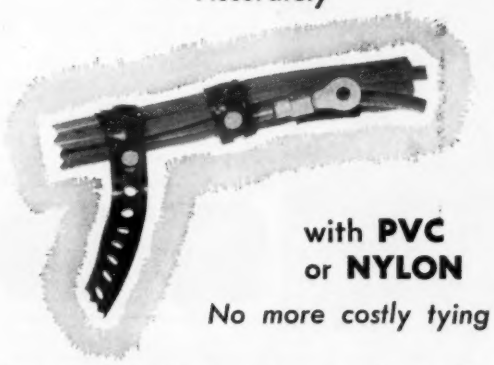
REVCO, Inc.
Setting Trends in Refrigeration since 1938 Deerfield, Michigan

▲ For more details circle **NED-1061 D** on enclosed inquiry slip ▲

CABLE STRAPPING

CAN NOW BE DONE

• *Quickly* • *Permanently* • *Accurately*



with **PVC** or **NYLON**

No more costly tying

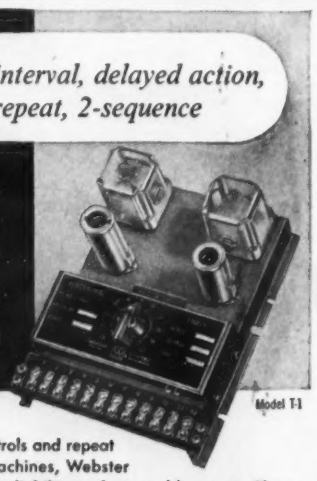
If you have a cable strapping or marking problem . . . send today for samples and catalogues, to:

HELLERMANN CORPORATION
701 SENECA ST. • BUFFALO 10, N.Y.

▲ For more details circle **NED-1062 D** on enclosed inquiry slip ▲

TIME ... *interval, delayed action, repeat, 2-sequence*

WEBSTER ELECTRIC TIMERS



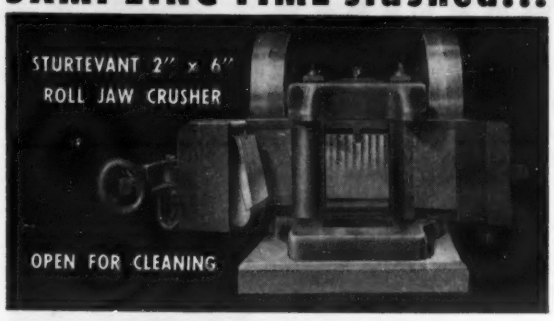
Designed for life tests of products, proportioning controls and repeat timing of processes and machines, Webster timers provide exceptional reliability and unusual low cost. They operate with minimum current consumption and maximum tube life. No warm-up time is required — cold cathode-type tubes respond immediately upon demand. Features include built-in regulation; remote operation; plug-in timing relays; sealed Mylar condensers. Single and double relay models. Three styles: open panel mounting; with NEMA 1-A semi dust-tight enclosures; with NEMA X11 oil and water-tight enclosures.

Bulletin EC1-1 gives data, specifications and wiring diagrams. Write today!

COMPONENTS DIVISION
WEBSTER ELECTRIC
RACINE WIS

▲ For more details circle **NED-1063 D** on enclosed inquiry slip ▲

SAMPLING TIME slashed...



'... by Small-Scale Duplication of Full-Scale Production!

12-PAGE BULLETIN PROVES IT!

SEE how exclusive "OPEN-DOOR" design makes cleaning and maintenance quick and easy . . . how rugged construction keeps equipment running round the clock for years.

COMPARE the capacities and performance of Sturtevant Roll Jaw Crusher, Crushing Rolls, Swing Sledge Mills and Sample Grinder with what you are now using.

LEARN why the "blue chips" in industry and education prefer Sturtevant Laboratory Equipment.

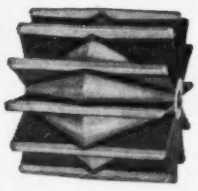
WRITE FOR 12-PAGE BULLETIN on Sturtevant Laboratory Equipment and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT
Dry Processing Equipment
The "OPEN-DOOR" to lower operating costs over more years
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

▲ For more details circle NED-1064 D on enclosed inquiry slip ▲

DESIGNED TO CUT BELT COSTS

SPROUT-WALDRON
BELT-SAVER PULLEYS



Write for Bulletin 33-C

The life of conveying belts can be increased from 50% to 400% with unique Belt-Saver Pulleys in installations handling sharp lumps and abrasive materials. Such materials slide away from the pulleys because of the special cone and wing design so belts cannot be damaged. For applications ranging from the handling of stone and gravel to wood chips and foundry sand, Belt-Savers are big money savers.

Sprout-Waldron also offers a full line of cast-iron pulleys for transmission and conveyer use that provide top economies. Write for details.

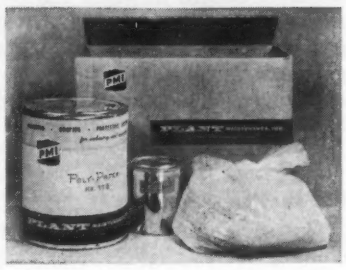
IN/500

SPROUT-WALDRON
Manufacturing Engineers Since 1866
LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION—MIXING & BLENDING — BULK MATERIALS HANDLING — PELLETING & CUBING — PRODUCT CLASSIFICATION

▲ For more details circle NED-1065 D on enclosed inquiry slip ▲

New Processes & Materials

CONCRETE FLOOR PATCH
resists acids, withstands loads



Cracks, holes, and depressions in concrete floors are repaired by Poly-Patch, supplied in kit form. High strength material withstands heavy loads and is resistant to acids, water, oils, and other surface-damaging elements. Also used for bolt anchoring, it bonds tenaciously to clean surfaces. Kit price is $10.85. • **Plant Maintenance, Inc.**, 623 Green Rd., Cleveland 21, Ohio.

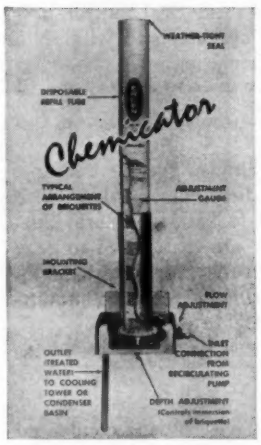
▲ For more details circle NED-1066 D on enclosed inquiry slip ▲

FLUX REMOVING COMPOUND
powder is mixed with hot water

Tenacious glass-like flux residues left by brazing or soldering are quickly dissolved by Bernite 45 flux removing compound. It acts in a matter of minutes and also pickles the metal. This dry powder is mixed with 150° F water in any type of tank. It is also possible to place the heated metal into a cold solution of the flux remover with equally effective results. • **Bernard Chemical Products Co.**, 98-21 Linden Blvd., Ozone Park 17, N. Y.

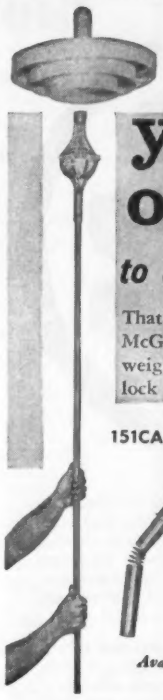
▲ For more details circle NED-1067 D on enclosed inquiry slip ▲

WATER SYSTEM TREATMENT
feeds chemical to prevent corrosion



Precise amounts of chemical treatment are fed into circulating water systems of cooling towers and evaporative condensers by the Chemicator, a small, lightweight, closed reservoir which mounts on the side of the equipment. Device gravity feeds compressed chemical briquettes into water flowing through the reservoir. These are formulated to prevent the formation of scale and rust, and to control pH, algae, and slime. Briquettes dissolve slowly, and treatment is carried into the entire water system. Chemicals are fed only when pump is operating. Chemicator sells for about $20, and installation averages about $5. • **Erlen Products Co.**, 700 S. Flower St., Burbank, Calif.

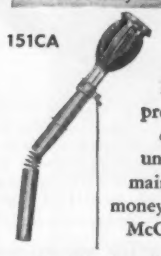
▲ For more details circle NED-1068 D on enclosed inquiry slip ▲



keep your feet on the floor
to change bulbs in safety

That's exactly how you change bulbs with McGills Adaptable Lamp Changer, for a light weight insulated steel pole in 5' sections that lock securely in place enables you to change bulbs easily up to .20' above the floor. There are 9 different heads available to handle your present bulbs. Why not eliminate the danger of unsafe ladders and save maintenance time and money? You can with a McGill Lamp Changer.

151CA



200

Available from Electrical Wholesalers

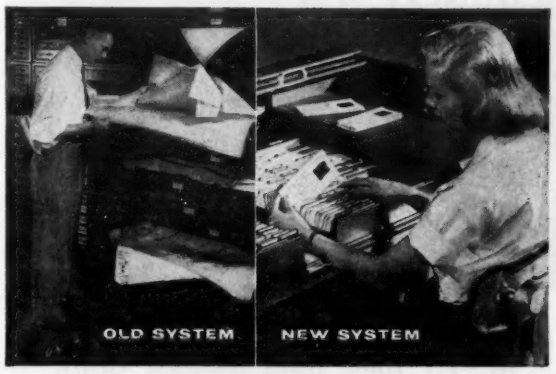
Write for McGILL catalog No. 84

engineered electrical products
McGILL
precision needle roller bearings

McGILL MFG. CO., INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle NED-1069 D on enclosed inquiry slip ▲

thanks to **automatic xerography**



REDUCE DRAWING-STORAGE SPACE UP TO 95%
Save $20,000 to $100,000 yearly on time, labor, and materials!

How would you like to reduce—by as much as 95%—the storage space you now allot to active and inactive engineering drawings?

In so doing, you'll also reduce time and labor costs dramatically. Savings as high as $100,000 a year can be achieved because of a spectacular breakthrough in storage and reproduction techniques.

This development, called a unitized microfilm system has three basic steps: microfilming original drawings or changes; mounting individual frames into die-cut apertures of data-processing cards; and, from the cards, automatically enlarging the microfilmed drawings by xerography, fast and economically, in a XeroX® Copyflo® 24C continuous printer.

Dry, positive prints, translucent intermediates, or offset paper masters emerge at the rate of 20 feet a minute. They are automatically cut, and ready for immediate use.

The aperture cards, which may be machine-sorted for any combination, are stored in miniature working files, occupying only a tiny fraction of the space required by blueprints, intermediates, or originals.

There is no refiling. The quality of xerographic prints is superbly high, yet they are so inexpensive that engineers are urged to discard them after use.

Unitized microfilm systems offer many other striking economies in time, money, and materials.

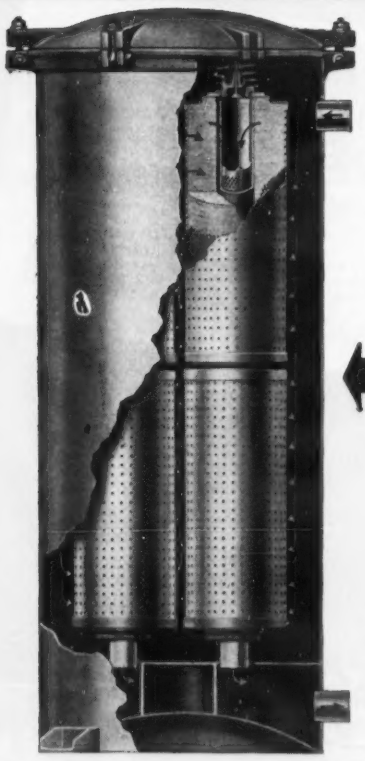
PUSH THE BUTTON...
and copies flow!

For complete details, write for booklet X-287

HALOID XEROX INC.
60-207X Haloid St., Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES
Overseas: Rank-Xerox Limited, London, Eng.

HALOID XEROX®

▲ For more details circle NED-1070 D on enclosed inquiry slip ▲



HILCO

FOR SUPER FILTRATION OF ALL TYPES OF LIQUIDS HILCO FILTERS CUT COSTS

Filter Cartridges of All Types to Take Care of Your Specific Filtration Problems . . .

HILCO'S ELIMINATE : VARNISH AND SLUDGE DEPOSITS : FLUSHING AND MANUAL CLEANING : FREQUENT LIQUID CHANGES :

• *Write for FREE Literature*

THE HILLIARD CORPORATION
31 W. FOURTH ST. • ELMIRA, N. Y.
IN CANADA . . . UPTON-BRADEEN-JAMES, LTD.
890 YONGE ST., TORONTO • 8760 VERVILLE ST., MONTREAL

BORIUM NOZZLES CLEAN FASTER

because MORE particles hit the target!

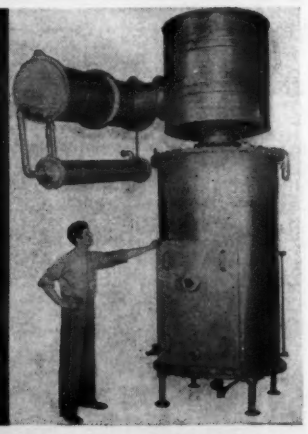
Because BORIUM Blast Cleaning Nozzles resist orifice wear and cut-outs the blast pattern stays closely grouped. This puts more particles in the target area—each delivered with extra impact because air velocity remains uniformly high. BORIUM is pure cast tungsten carbide—hardest known man-made metal.

BORIUM NOZZLES ARE GUARANTEED 300 HOURS when cleaning with silica sand; outlast hundreds of cast iron nozzles; increase blast cleaning nozzle life and efficiency with all abrasives. Write for free folder describing standard and special BORIUM Nozzle types.

STOODY COMPANY
11992 East Slauson Avenue, Whittier, California

▲ For more details circle NED-1071 D on enclosed inquiry slip ▲

BARNSTEAD INDUSTRIAL WATER STILLS



PRODUCING DISTILLED WATER UP TO 1000 GALLON PER HOUR

This Barnstead Industrial Water Still with 300 gallon per hour capacity produces pure distilled water of consistently high purity . . . and at low cost. Other industrial models with capacities up to 1000 g.p.h. Barnstead's Catalog "G" describes complete line of Water Stills . . . over 200 different models and sizes for laboratory and industrial use . . . engineered to meet your particular requirements.

Barnstead
STILL AND STERILIZER CO.
16 Lanesville Terrace, Boston 31, Mass.

▲ For more details circle NED-1072 D on enclosed inquiry slip ▲

HYDRAULIC REMOTE CONTROL SYSTEMS

Completely self-contained . . . single tube . . . remote control eliminates use of compensators. Rugged and reliable . . . used in engine, machine tool and many other factory applications . . . wherever positive, accurate, instant duplication of movement is needed . . . no "sponginess."

EASILY INSTALLED

Sperry CONTROLS
HYDRAULIC REMOTE CONTROLS
Representatives in Principal Cities
SPERRY PRODUCTS CO. • 1704 SHELTER ROCK RD. • DANBURY, CONN.

▲ For more details circle NED-1073 D on enclosed inquiry slip ▲

New Literature & Catalogs

Savings with Engineered Fasteners

Tinnerman Products, Inc.—Seventeen actual case studies presented in words and pictures in Bulletin 353 show assembly time and cost savings of up to 80 per cent through the use of Speed Nuts. These engineered fastenings are shown as they are applied to appliances, automobiles, electric equipment, furniture, toys, and many other products.

▲ For more details circle NED-1074 D on enclosed inquiry slip ▲

Production Facilities

Custom Tool & Mfg. Co.—Engineering, tooling, machining, fabricating, finishing, and inspection services and available equipment for performing them are described in this facilities brochure. Company serves the aircraft, missile, and electronics industries in particular, working with virtually all ferrous and nonferrous metals, including molybdenum, tungsten, and stainless steel.

▲ For more details circle NED-1075 D on enclosed inquiry slip ▲

Sprockets & Chain

Dodge Mfg. Co.—Expanded roller chain line described in 56-page Bulletin A691 includes single and double strand, single strand heavy series, double pitch drive, double pitch conveyor, double pitch conveyor with large rollers, and standard attachments. Advantages of Taper-Lock sprockets for secure and easy mounting on shafts are covered. Section is also devoted to Taper-Lock chain couplings. Selection data, prices, and general and engineering data are included.

▲ For more details circle NED-1076 D on enclosed inquiry slip ▲

Numerical Control Fundamentals

Ex-Cell-O Corp.—Approximate cost of getting into tape controlled machine operations is presented in 20-page "Guide Book of Numerically Controlled Machine Tools." Fundamentals of numerical control, how the different types of controls operate, and what Numera-Trol is are among subject matter.

▲ For more details circle NED-1077 D on enclosed inquiry slip ▲

Heavy Duty Transmissions

Cotta Transmission Co.—Single speed, multiple speed, and right angle heavy duty transmissions with input torque capacities of 150 to 2500 lb-ft are illustrated in 8-page catalog. They are customized to each application. Various arrangements for rotation, location, speed, multiple speeds, shifting, cooling, mounting, clutches, and output shafts are described.

▲ For more details circle NED-1078 D on enclosed inquiry slip ▲

Nuts of Various Types

National Machine Products Co.—12-page condensed catalog contains basic engineering data and specifications on 1/4 to 3-in. hexagon nuts, 1/4 to 5/8-in. 12-pointer nuts, and 1/4 to 1 1/2-in. Conelok, Huglock, and Marsden lock nuts.

▲ For more details circle NED-1079 D on enclosed inquiry slip ▲

Filling Equipment

Arthur Colton Co.—Colton, Colton-Hope, and Colton-Alpha filling equipment described in 8-page illustrated Catalog AC-60 includes automatic metal and plastic tube fillers; closers and crimpers for pastes, creams, and liquids; single, twin, and multiple liquid fillers; and single operation fillers, closers, and crimpers. Also covered are automatic conveyorized volumetric fill types, can coders, rotary unscramblers, container infeed timing screws, and aerosol filling machines.

▲ For more details circle NED-1080 D on enclosed inquiry slip ▲

Hydraulic Press

American Brake Shoe Co., Denison Engineering Div.—Versatility of the Multipress in performing broaching, compacting, nibbling, marking, peening, cleaning, riveting, molding, forging, swaging, and many other operations is illustrated in 24-page Bulletin 120. Cutaway drawings show why it is capable of exact control of ram speeds, pressures, strokes, and action. Specifications of available models are given.

▲ For more details circle NED-1081 D on enclosed inquiry slip ▲

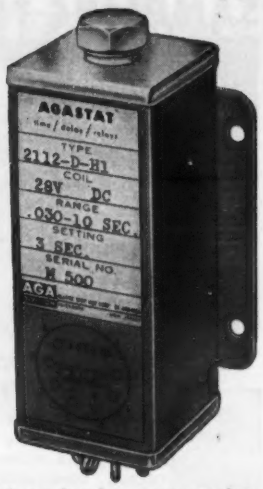
Air Regulators

Fairchild Engine & Airplane Corp., Stratos Div.—Performance and installation information on over 25 pressure regulators, volume boosters, and air relays are found in 24-page catalog. Kendall regulators covered are direct acting, and Governaire type are pilot operated. Circular slide rule includes simplified regulator selection.

▲ For more details circle NED-1082 D on enclosed inquiry slip ▲

NOW!

MINIATURE AGASTAT®
time/delay/relay



MEASURES ONLY 4"x1½"x1½"

The Miniature Agastat time delay relay is a space-saving answer to aircraft, missile and computer problems. You get all these valuable features in one small package:

- Easily adjusted timing ranges as short as .030 seconds.
- Repeat accuracy of ± 5%.
- Time delay on energizing or de-energizing.
- For DC or AC operation.
- Hermetically sealed or dust-proof housings.

Write today for the full details on the new miniature Agastat. Dept. A36-45.

AGA DIVISION — ELASTIC STOP NUT CORPORATION OF AMERICA
1027 Newark Avenue, Elizabeth, N. J.

Gasaccumulator Co., (Canada) Ltd., 12 Gower Street, Toronto 16, Ontario

▲ For more details circle NED-1083 D on enclosed inquiry slip ▲

SAVE UP TO 80% CLEANING TIME

in your plant with an all-electric "E-350" Hypressure Jenny®. Operating without flame,

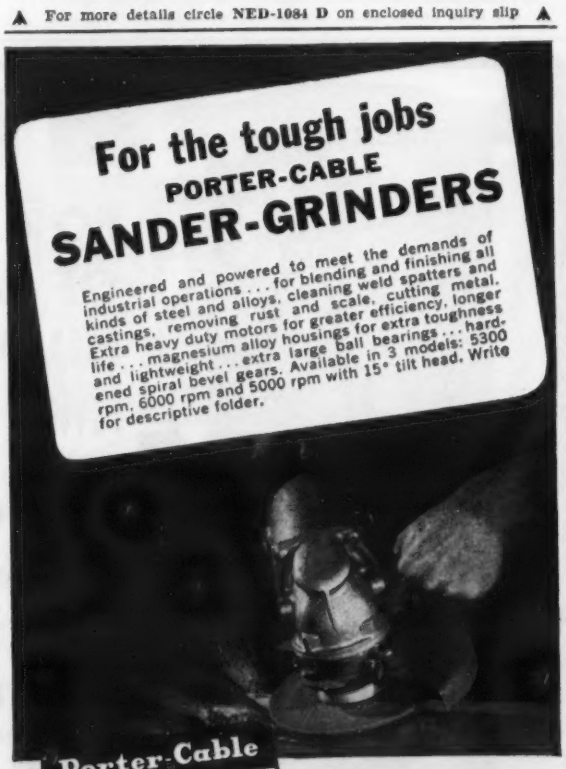
fumes, or excessive fog, this tough, cost-cutting unit enables you to clean and sanitize equipment, even when plant is in operation, without annoyance to workers. Starts instantly; operates quietly; simple and easy to use. Full details? Write or check item number.

hv — HOMESTEAD VALVE MANUFACTURING COMPANY
Hypressure Jenny Division, Coraopolis, Pa.
(In Canada: Hypressure Jenny Sales & Service, Ltd., 517 Jarvis Street, Toronto 5, Ont. C.S.A. Approved)

▲ For more details circle NED-1084 D on enclosed inquiry slip ▲

For the tough jobs PORTER-CABLE SANDER-GRINDERS

Engineered and powered to meet the demands of industrial operations . . . for blending and finishing all kinds of steel and alloys, cleaning weld spatters and castings, removing rust and scale, cutting metal. Extra heavy duty motors for greater efficiency, longer life . . . magnesium alloy housings for extra toughness and lightweight . . . extra large ball bearings . . . hardened spiral bevel gears. Available in 3 models: 5300 rpm, 6000 rpm and 5000 rpm with 15° tilt head. Write for descriptive folder.



Porter-Cable Quality Power Products

PORTER-CABLE MACHINE CO.
6124 Marcellus St., Syracuse 4, N.Y.

▲ For more details circle NED-1085 D on enclosed inquiry slip ▲

Time Control

with easy-to-use *EAGLE* CYCL-FLEX reset timers

A highly accurate and dependable easy-to-use timer, designed for mounting in control panels. Sealed dial protects timer when exposed to oil and dust conditions. Timer switches control four load circuits. Interlocking contacts are provided without the use of auxiliary relays. Synchronous motor drive insures accurate timing.

WRITE for descriptive Bulletin 120. Address Dept. NED-460.

EAGLE SIGNAL COMPANY
MOLINE, ILLINOIS

REPRESENTATIVES IN PRINCIPAL CITIES

▲ For more details circle NED-1086 D on enclosed inquiry slip ▲

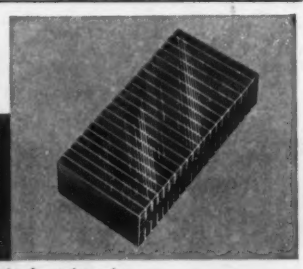
Whitnon, leading builder of precision spindles, has the bearings, parts, facilities and craftsmen for prompt, economical service on any make anti-friction spindle. Two repair addresses: **Whitnon** Spindle Co., 20466 Wyoming Avenue, Detroit 21, Michigan . . . The **Whitnon** Manufacturing Company, Route 6 and New Britain Avenue, Farmington, Connecticut

Whitnon

▲ For more details circle NED-1087 D on enclosed inquiry slip ▲

Get precision that gives precision . . .

Magnetic PARALLELS and V-BLOCKS



PARALLELS . . . ground singly or in pairs

Number	Dimensions	Wt. Each	Price Each	Price Pair
M-1	⅜ x 1½ x 3	1¼ lbs.	$11.00	$20.00
M-2	⅜ x 1½ x 6	2¼ lbs.	17.00	30.00
M-11	⅜ x 2 x 4	2½ lbs.	17.50	31.00
M-153	1 x 1½ x 3	1½ lbs.	13.00	23.00
M-22	1 x 2 x 2	1½ lbs.	12.00	21.00
M-23	1 x 2 x 3	2 lbs.	15.00	27.00
M-3	1 x 2 x 4	2¾ lbs.	18.00	32.00
M-4	1 x 2 x 6	4 lbs.	19.00	34.00
M-28	1 x 2 x 8	5¾ lbs.	22.00	39.00
M-255	1 x 2½ x 5	3½ lbs.	20.00	36.00
M-34	1 x 3 x 4	3¼ lbs.	20.00	36.00
M-5	1 x 3 x 6	6 lbs.	26.00	46.00
M-38	1 x 3 x 8	7½ lbs.	37.00	66.00
M-312	1 x 3 x 12	12 lbs.	52.00	93.00
M-356	1 x 3½ x 6	6¾ lbs.	32.00	57.00
M-6	1 x 4 x 4	5½ lbs.	22.00	39.00
M-46	1 x 4 x 6	8 lbs.	37.00	66.00
M-48	1 x 4 x 8	9¼ lbs.	45.00	81.00
M-412	1 x 4 x 12	18 lbs.	73.00	131.00
M-510	1 x 5 x 10	18 lbs.	77.00	138.00
M-610	1 x 6 x 10	20 lbs.	79.00	142.00
M-612	1 x 6 x 12	24 lbs.	100.00	180.00
M-7	1 x 6 x 8	22 lbs.	86.00	154.00
M-8	1⅛ x 1⅝ x 4½	3½ lbs.	19.00	34.00
M-9	1¾ x 2 x 3	1½ lbs.	17.00	30.00
M-248	2 x 4 x 8	18 lbs.	86.00	154.00

V-BLOCKS . . . 90° V and 45° from centerline

Size No.	Height, Inches	Width, Inches	Length, Inches	Price Each	Price Pair
MV-1	1⅜	2½	2½	$38.00	$68.00
MV-2	1¾	2½	4	58.00	102.00
MV-3	2	6	6	96.00	172.00
MV-4	1⅝	2½	6	72.00	129.00

Order now for prompt delivery!

Hanchett MAGNA-LOCK, CORP BIG RAPIDS, MICHIGAN

▲ For more details circle NED-1088 D on enclosed inquiry slip ▲

New Literature & Catalogs

Dust Control Equipment

Fuller Co., Dracco Div.—"Freedom from Dust" is title of 28-page Bulletin 805 describing a range of dry dust collection equipment. Ways of using cloth filtration and cyclonic equipment for eliminating dust control and air pollution problems in industry are shown. Specifications are provided on Multi-Bag filter, Uni-Filter, Glass-Bag filter, and Whirl-Clone equipment. Special collectors and accessories are also covered.

▲ For more details circle NED-1089 D on enclosed inquiry slip ▲

Jig & Fixture Components

Northwestern Tools, Inc.—All of the standard components company manufactures including the new quick-acting hand knobs and inserts are listed in Catalog 30. These include jig and fixture components and step blocks and clamps. Punch press sets, T-nut and stud sets, and step block and clamp sets are also offered.

▲ For more details circle NED-1090 D on enclosed inquiry slip ▲

Bronze Bushings, Bearings & Bar Stock

Johnson Bronze Co.—Products, manufacturing, sales, and service facilities of this company are covered with words and pictures in 8-page brochure. Company makes over 900 sizes of cast bronze bushings, over 350 electric motor bearings, and over 500 sizes of universal bronze bars, aluminum bronze bars, and Continucast bronze bars.

▲ For more details circle NED-1091 D on enclosed inquiry slip ▲

Air & Lift Tables

Clark-Aiken Co.—Packages or piles of paper, film, and foil are easily moved on Air Tables as they ride on a layer of air blown through holes. Tables are made in any size or shape. Hydraulic lift tables with capacities to 6000 lb elevate from floor level to 48 in. Both types of equipment are detailed in 4-page illustrated bulletin.

▲ For more details circle NED-1092 D on enclosed inquiry slip ▲

Punch & Die Button Retainers

Atlantic Tool & Die Co.—Standard and heavy duty types of Ball-Lock punch and die button retainers are made in round, square, rectangular, or odd shapes, according to 4-page illustrated bulletin. They are made of oil-hardening tool steel with hardened back-up plates and are interchangeable with other ball-lock types.

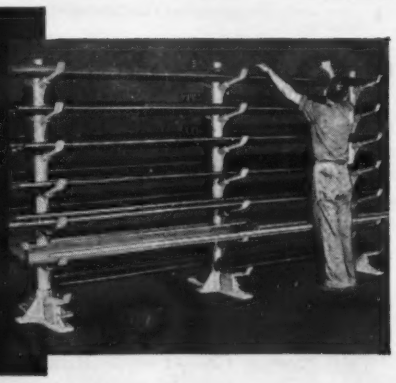
▲ For more details circle NED-1093 D on enclosed inquiry slip ▲

Indexing Mechanisms & Tables

Ferguson Machine Corp.—Load ratings, dimensions, and installation data are presented in table form in 40-page illustrated Catalog 160 on standard roller gear drive indexing mechanisms, high speed precision index tables, in-line transfer machines, and allied equipment. A direct power unit with motor, and a clutch-brake and reducer which mounts on the index table cam shaft are new features.

▲ For more details circle NED-1094 D on enclosed inquiry slip ▲

SAVE SPACE • SAVE TIME



Store and remove stock quickly—either by hand, fork truck or overhead crane—using the proved Brown Method for efficient storage. Brown Stock Racks, spaced as required, store more in less space . . . reduce handling from a long end haul to a short lateral movement. Stock is quickly visible for fast selection . . . easily accessible from the sides or ends.

Very low installation costs . . . all components are slip-fitted . . . no bolting or tools needed. Base brackets, trays and other accessories are available to increase usefulness. Both single arm wall racks and double arm racks are available.

Brown Engineering Co., 129 N. 3rd St., Reading, Pa.

■ Get complete data on Quick-Serve Racks. Write today for bulletin.

BROWN FLEXIBLE STOCK RACKS

▲ For more details circle NED-1095 D on enclosed inquiry slip ▲

NEED HELP ON HEAT TRANSFER?

Call for a Wolverine Heat Transfer Specialist to discuss Wolverine Trufin®, the integral finned tube for increased heat transfer!

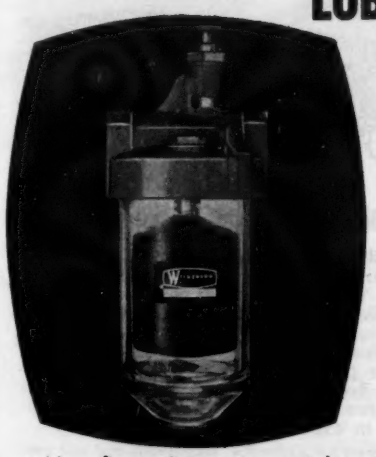
Wolverine Trufin is available in Canada through the Unifin Tube Division, London, Ontario.

WOLVERINE TUBE
DIVISION OF CALUMET & HECLA, INC.
17272 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

▲ For more details circle NED-1096 D on enclosed inquiry slip ▲

CONSTANT, dependable PROTECTION

WILKERSON *Autofill* LUBRICATOR



The positive action of the float-operated valve on the Autofill keeps lubricator from running dry.

- New finger-tip KWIK-CHANGE bowl
- 150 PSI maximum air pressure
- Low Cost
- 250 PSI maximum lubricant pressure

Complete information contained in new Circular #1028 will prove the safety advantages of the Wilkerson AUTOFILL

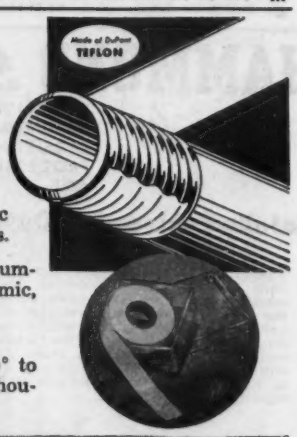
WRITE TODAY
1633 West Girard
Englewood, Colo.

WILKERSON CORPORATION

Dedicated to keeping the NEW in pNEUmatics

▲ For more details circle NED-1097 D on enclosed inquiry slip ▲

New Sealer *THRED-TAPE*



SEALS ANYTHING: chemicals, corrosives, hydraulic fluids, Freon 22, aromatic fuels, solvents, toxics, gases.

ALL TYPES OF PIPE: plastic, aluminum, stainless steel, ceramic, synthetic rubber, carbon.

ALL THREADED CONNECTIONS
Temperature range −250° to +500°F., pressures to thousands of pounds.

EASY TO USE

Just cut to length and wrap tightly around pipe. Press overlap to secure and make connection in usual fashion. No mess.

Available in ¼", ½", ¾" and 1" x 288" rolls, also ½" x 576" rolls... packaged in a protective, clear plastic box.

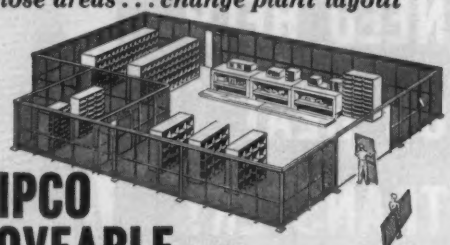
Request sample and full information.

John Crane® CRANE PACKING COMPANY

6411 OAKTON STREET, MORTON GROVE, ILLINOIS (*Chicago Suburb*)
In Canada: Crane Packing Co., Ltd., Hamilton, Ontario

▲ For more details circle NED-1098 D on enclosed inquiry slip ▲

New low-cost way to set up a department, enclose areas . . . change plant layout



WIPCO MOVEABLE WIRE PARTITIONS

NO SPECIAL TOOLS . . . NO SPECIAL CREWS NEEDED—*your own men* set them up, relocate them . . . *at less than the cost of wood framing and wire netting!* Everything you need—Standard panels plus all accessories (doors, windows, top panels, bars, braces, etc.)—available immediately from factory stock. Made of tough, machine woven steel wire, Wipco Partitions protect areas against theft and loss, permit ventilation and visibility . . . economical to maintain. *For firm price, send free hand sketch of areas to be enclosed.*

Write Today for Bulletin P-55

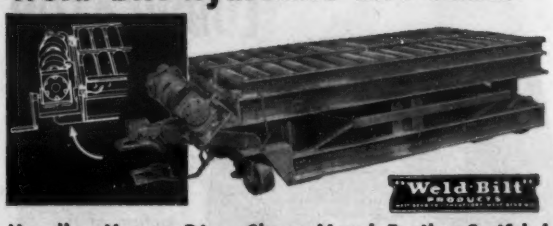
Wire and Iron Products, Inc.,
1727 Sixteenth St., Detroit 16, Mich.

WIPCO

▲ For more details circle NED-1099 D on enclosed inquiry slip ▲

New Dual Purpose

Weld-Bilt Hydraulic Lift Table



Handles Heavy Dies, Sheet Metal Easily, Swiftly!

Equipped with a roller conveyor top and hand winch, this heavy-duty Weld-Bilt Hydraulic Lift Table is designed as a *double-duty* unit. With the winch in position, it simplifies moving heavy dies onto and off of your presses. Then the winch can be swung down out of the way and the lift table used to feed heavy sheet steel for press operation. Wheels and casters permit easy positioning. The foot pedal control is an electric switch for powered raising or lowering table for press-height feeding. Various top dimensions available in capacities up to 30,000 lbs.

Call on Weld-Bilt engineers for assistance, suggestions and cost estimates for your heavy-duty lifting jobs. Or write for bulletin No. HT358.

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS
311 Water Street, West Bend, Wisconsin

▲ For more details circle NED-1100 D on enclosed inquiry slip ▲

HAMMOND Screw-Lift *Provides*

POSITIVE DELIVERY OF FREE-FLOWING BULK MATERIALS FROM RECEIVING HOPPER TO POINTS OF PROCESSING, PACKING OR STORAGE

Totally Enclosed — Dust-Tight — Sanitary

There is no vertical screw conveyor that can compare with a Screw-Lift because its design includes all the elements that make operation successful. For instance, **the patented enlarged junction** where the horizontal and vertical units meet—that's what forestalls choking at this vital point! The vertical screw takes up all the material which the horizontal unit feeds into it. This, coupled with Patented Stabilizer Bearings and special treatment of flights at feed and discharge ends further produces a smooth flow of material.

The casing is split for accessibility. Patented Slip Couplings permit removing any lengths of conveyor. There are no cumbersome drives or complicated supports required. The unit is compact, requires little space and is simple to install. It functions as a machine, coordinated with your other processing equipment.

Where materials of an edible nature are to be handled, Screw-Lift is obtainable in a quick-opening type for easy cleaning by vacuum or scrubbing. Alloy metals, such as, Stainless Steel, Everdur, Brass, besides Steel and hot-dip galvanizing, are also used in its manufacture.

Screw-Lifts have solved many difficult elevating problems. Our engineers will gladly assist you in adapting them to your needs. Write for Bulletin M-500-2

Three of the largest food processing plants in the U.S.A. have over 100 Screw-Lifts in continuous operation

Screw Conveyor Corporation
110 HOFFMAN STREET HAMMOND, INDIANA
WIGGINS, MISSISSIPPI HAMMOND PRODUCTS SANTA CLARA, CALIFORNIA
ENGINEERS MANUFACTURERS

▲ For more details circle NED-1101 D on enclosed inquiry slip ▲

New Literature & Catalogs

Precision Electrical Meters

Greibach Instruments Corp.—Meter Master chart incorporated in 20-page catalog quickly determines the one meter that combines up to 23 ranges to meet individual electrical measuring needs. Each of the thousands of possible electric meter combinations uses the Bifilar suspension principle for extreme sensitivity and accuracy. Current, voltage, and high resistance meters in portable, panel, and bench models are covered, and prices are given.

▲ For more details circle NED-1102 D on enclosed inquiry slip ▲

Speed Reducers & Screw Conveyor Drives

Dodge Mfg. Corp.—Torque-Arm shaft-mounted speed reducers, subject of 64-page illustrated Bulletin A692, are built for capacities up to 170 hp, with output speeds from 10 to 400 rpm, in single and double reductions, and 5:1, 15:1, and 25:1 ratios. Construction details, dimensions, prices, and installation data are presented. Section is devoted to screw conveyor drives, available in four sizes, three ratios, and single and double reductions. Tables simplify selection.

▲ For more details circle NED-1103 D on enclosed inquiry slip ▲

Metals Testing Machines

American Machine & Metals, Inc., Riehle Testing Machines Div.—Screw power testing machines with capacities from 2000 to 400,000 lb; hydraulic testing machines with 10,000 to 400,000-lb capacities; plus accessories and instrumentation are described in illustrated 40-page catalog. Also covered are Riehle calibration service and other testing machines.

▲ For more details circle NED-1104 D on enclosed inquiry slip ▲

All About Polypropylene

Hercules Powder Co.—Pro-Fax polypropylene is a thermoplastic with a high softening temperature that maintains its rigidity well above 212° F. As described in 20-page illustrated technical booklet, it has a low density and high strength-to-weight ratio. Its properties, chemical resistance, and injection molding, extrusion, and fabrication data are presented.

▲ For more details circle NED-1105 D on enclosed inquiry slip ▲

Small Motors & Relays

Barber-Colman Co.—Rated horsepower, dimensions, special features, and typical applications of line of alternating and direct-current fractional-horsepower motors, tachometer generators, and sensitive relays are found in 4 pages of Bulletin F-9765. Motors are available in various ranges, styles, and specifications.

▲ For more details circle NED-1106 D on enclosed inquiry slip ▲

Electric Brake & Clutch Controls

Warner Electric Brake & Clutch Co.—Standard, special, and custom controls used to actuate Warner electric brakes and clutches are described in illustrated 8-page Booklet P-75. The compact torque control packages convert alternating current to direct current. Table presents helpful selection data.

▲ For more details circle NED-1107 D on enclosed inquiry slip ▲

Roller Chains & Sprockets

Link-Belt Co.—Over 2000 types and sizes of stock roller chains and sprokets, including standard and double pitch power transmission chains, are listed in 44-page Book 2757. An 18-page section lists single, double, triple, and quadruple strand standard roller chains, plus other types of chains. Specifications and many dimensional drawings are included.

▲ For more details circle NED-1108 D on enclosed inquiry slip ▲

Hydraulic Rams & Pumps

Duff-Norton Co.—Twelve Ram-Pac hydraulic rams with capacities from 10 to 100 tons and two hand and three power pumps are detailed in 8-page illustrated Bulletin AD-90. The pumps are air, electric motor, and gasoline engine driven. Specifications are given for all equipment, plus accessories.

▲ For more details circle NED-1109 D on enclosed inquiry slip ▲

Moving Air With Propeller Fans

Hartzell Propeller Fan Co.—A new line of low-speed high-volume fans is subject of illustrated Guide Book A-109E. Fans range in size from 65 to 94 in., with belt, direct, and pulley drives. Largest fan moves 174,000 cfm free air or 157,000 cfm against ¼-in. static pressure. Other fans covered include 12 to 60-in. diameter ring and panel mounted types, Lo-Noise and high pressure models, and pedestal and wheel mounted fans for spot cooling.

▲ For more details circle NED-1110 D on enclosed inquiry slip ▲

On Blue Streak® Dispenser Cards

If it's to be numbered, marked or identified, this is the low cost, simple way to do it. Brady Numbers and Letters stick instantly, permanently — provide quick identification *in any combination* for areas, columns, aisles, fire stations, pallets, shelves, bins, drawers. Six stock sizes: ½", ¾", 1½", 2¼", 3½" or 5" Black legends on yellow super-strength vinyl-cloth. Specials made to order . . . variety of colors.

WRITE FOR FREE WORKING SAMPLES

W. H. BRADY CO.

Manufacturers of Quality Self-Sticking Industrial Products.

763 West Glendale Avenue • Milwaukee 9, Wisconsin • Est. 1914

▲ For more details circle NED-1111 D on enclosed inquiry slip ▲

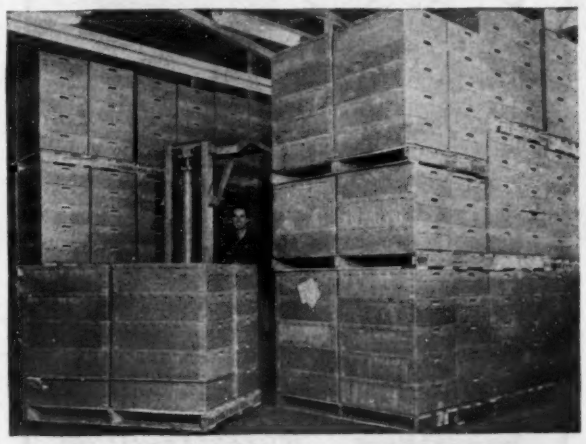
LOOKING FOR WAYS TO CUT COSTS?

CONVOY'S CHEMBOARD* SELF-STACKING TOTE BOXES *MAY BE YOUR ANSWER*

Convoy Boxes are LOW COST, STRONG and LIGHT WEIGHT . . . are made in a wide range of stock sizes and shapes. They weigh and cost less than 40% of steel.

*Chem-Board is Convoy's chemically impregnated corrugated board . . . flint-hard, rock-strong.

Here's an example of Convoy Self-Stacking Boxes speeding production, conserving space, saving money.



GET IN TOUCH WITH

CONVOY, INC.

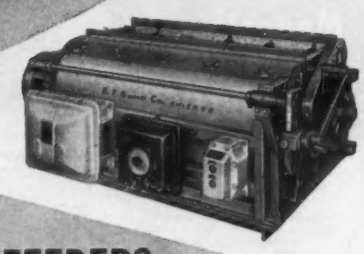
CANTON 6, OHIO
P. O. Station B, Box 216-N

STANDARD AND CUSTOM-MADE NESTING, STACKING, and VERTICAL-SIDED CHEM-BOARD TOTE BOXES

▲ For more details circle NED-1112 D on enclosed inquiry slip ▲

Regulate Bulk Feeding . . .

and prevent production choke-ups!



DRAVER FEEDERS

now available with automatic timing controls

Prevent overloading of production machines. Accurate, trade-proved Draver Feeders regulate the flow of dry free- or nonfree-flowing products . . . keep processing equipment operating at most efficient capacity . . . prevent machine failure and downtime. Now available with timing controls, for feeding to continuous processes at automatic intervals. Capacities from minute quantities up to thousands of pounds per hour. What is your bulk feeding problem? Write our engineering department for a solution, without obligation.

FEEDING · MIXING · SIFTING · GRINDING · WEIGHING · PACKING and PACKAGING EQUIPMENT FOR THE PROCESS INDUSTRIES

B. F. GUMP CO.

Engineers and Manufacturers since 1872

1336 S. Cicero Avenue, Chicago 50, Illinois

▲ For more details circle NED-1113 D on enclosed inquiry slip ▲

SELF-ADHERING COVERINGS

Like putting mittens on kittens, you can protect polished finishes on aluminum, stainless steel, plastics, glass . . . metals and materials of all kinds . . . This self-stik "skin" applies quickly from the roll—provides a tough, scratch-proof covering during all processing, fabricating, handling, shipping, storage. Write today for information and samples.

MYSTIK SELF-STIK® **Mystik Adhesive Products, Inc.** 2635 N. Kildare Ave., Chicago 39

▲ For more details circle NED-1114 D on enclosed inquiry slip ▲

SOLVE ROTARY MOTION PROBLEMS

- SAFE, LEAKPROOF PERFORMANCE
- BUILT IN CUSHIONS
- OIL, AIR, WATER OR GAS
- Transfer Mechanisms
- Indexing
- Positioning
- Valve Operation
- Cam Actions

SEND FOR NEW BULLETIN RA-500 Complete Details and specifications. All essential design data. Send today!

CARTER CONTROLS, INCORPORATED
2876 Bernice Road, Lansing, Ill.
Phones: Lansing—GRanite 4-3305 • Chicago—BAyport 1-7188

▲ For more details circle NED-1115 D on enclosed inquiry slip ▲

NO TRAFFIC JAMS HERE!

"Ruff-Top" handles all sizes . . . at any angle up to 43°

Quaker Thermoid "RUFF-TOP" CONVEYOR BELTING

If continuous conveying of packages, cartons, boxes, and other smooth, flat objects is your problem, "Ruff-Top" is the answer. Its thousands of small, rough, irregular-shaped points of soft rubber take a firm grip on the lightest load.

There's a Thermoid-Quaker Belt to do your conveying job at the lowest cost per ton of material moved. Consult your Thermoid distributor, or write today direct to *Thermoid Division, H. K. Porter Company, Inc., Tacony and Comly Streets, Philadelphia 24, Pa.*

THERMOID PORTER DIVISION

H.K. PORTER COMPANY, INC.

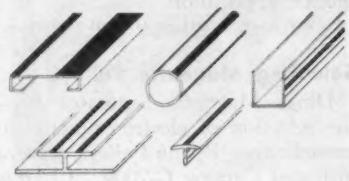
PORTER SERVES INDUSTRY with 14 DIVISIONS including: Thermoid, Delta-Star Electric, National Electric, Peerless Electric, Riverside-Alloy Metal, Refractories, Connors Steel, Vulcan-Kidd Steel, Forge and Fittings, Coldform, Disston, Leschen Wire Rope, H. K. Porter Company de Mexico, S. A., and H. K. Porter Company (Canada) Ltd.

▲ For more details circle NED-1116 D on enclosed inquiry slip ▲

New Processes & Materials

TWO-TONE PLASTICS made by multicolor extrusion

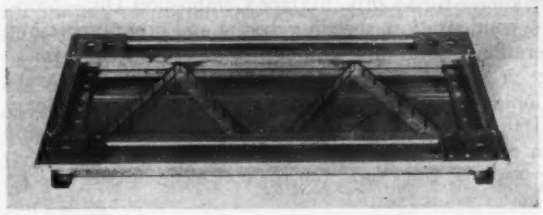
Plastic components such as radio and appliance dial scales, cabinet and panel moldings, handles, pen barrels, and decorative trim are now available in two-tone color effects. They are produced by a multicolor extrusion process that allows any combination of two opaque or translucent colors, or crystal-clear plus any color, to be specified. Second color is not a surface effect, but is an integral part of the extrusion, several thousandths of an inch thick. Twin-Tint extrusions are made to specifications in most thermoplastic materials. • **Anchor Plastics Co.,** 36-36 36th St., Long Island City 6, N. Y.



▲ For more details circle NED-1117 D on enclosed inquiry slip ▲

VIBRATION DAMPING MATERIAL wide frequency range product can be stretch-formed, riveted, and welded

Resonant response of structures, equipment, and components exposed to high frequency vibration and "white" or wide band noise is controlled by Dyna-



damp damping material. It uses a form of Lord BTR (broad temperature range) elastomer to maintain damping and environmental resistance characteristics over a −65 to 250° F range. Developed for aircraft and missile use, it controls response over a wide range of disturbing frequencies.

Material is available in structural sections or laminated panels which may be added to existing structures, or fabricated as complete damped assemblies. Laminated panels consist of BTR elastomer sandwiched between plies of metal and bonded to them. Typical 20 x 20-in. panel weighs 1.01 lb per square foot, comparable to an aluminum sheet of the same size.

Panels can be punched, sheared, and formed by stretch forming techniques. Ultimate strength is about 60 per cent of solid aluminum. Fastening may be by riveting, spot welding, or adhesive bonding. • **Lord Mfg. Co.,** 1635 W. 12th St., Erie, Pa.

▲ For more details circle NED-1118 D on enclosed inquiry slip ▲

THERMOPLASTIC MATERIAL possesses unusual electrical, mechanical, thermal properties

An unusual combination of physical, thermal, and electrical properties is exhibited by Merlon thermoplastic - type polycarbonate resin which can be processed by conventional methods. No plasticizers are required, and dyes or pigments will not affect its properties. Applications include insulators, cable wrapping, capacitors, distributor caps, meter cases, computer components, shell cases, decorative moldings and handles, glazing, medical and dairy vessels, wiring connectors, and coil forms.

Parts can be machined, sawed, stamped, solvent-bonded, and heat welded or heat sealed. Properties are stable between −40 and 280-290° F. Plastic is self-extinguishing and will not splinter when struck by a sharp object. It is chemically stable against water, dilute mineral and organic acids; saturated aliphatic hydrocarbons; oils, waxes, and bleaches; photo chemicals; most foods; and many disinfectants. • **Mobay Products Co.,** Penn-Lincoln Parkway W., Pittsburgh 5, Pa.

▲ For more details circle NED-1119 D on enclosed inquiry slip ▲

DELAVAN

SPRAY NOZZLES for industrial use

You'll find the nozzle that's right for your specific requirements in the complete selection offered by Delavan.

Manufacturers all over the world rely on Delavan for high quality, precision industrial nozzles.

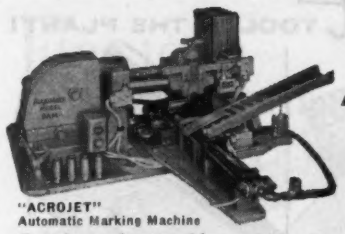
Whatever your nozzle requirements, specify Delavan.

Write for Catalog 33 for complete details and technical specifications.

DELAVAN Manufacturing Company WEST DES MOINES • IOWA

▲ For more details circle NED-1120 D on enclosed inquiry slip ▲

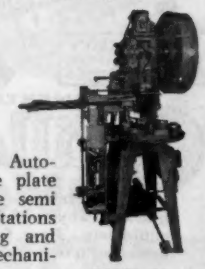
MAKE YOUR MARKING 'AUTOMATIC' with ACROMARK® MACHINES



"ACROJET" Automatic Marking Machine

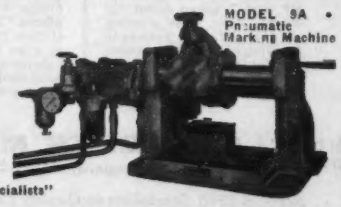
Quietly and smoothly, parts pass down a conveyor, are air-injected to marking position, MARKED, then air-ejected to conveyor or carry away. Marking head is driven by gear reduction motor with push button control and air-valve.

A Multi-Station Dial Feed and Automatic Stacker make this name plate and product stamping machine semi or wholly automatic. Several Stations provide room for multi-feeding and multi-stamping. Electric and Mechanical Controls.



MODEL 2A with Dial Feed and Stacker

Write today for 1960 Marking Machine Catalog which includes details of 9A Air Driven low cost Marking Machines, below.



MODEL 9A • Pneumatic Marking Machine

The ACROMARK Company
7-11 Morrell Street
Elizabeth 4, N. J.
"The Original Marking Specialists"

▲ For more details circle NED-1121 D on enclosed inquiry slip ▲

after 61 years

"SMART" SOLDERING STARTS WITH THIS SPOOL!

Kester Solder

KESTER FLUX-CORE SOLDER is always first choice with those who know solder. They like the way it helps keep production costs in line, speeds assembly, assures dependable performance. Yes, American industry is sold on Kester . . . how about you?

WRITE today for free Kester 78-page technical manual, "SOLDER . . . Its Fundamentals and Usage."

KESTER SOLDER COMPANY
4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada
Anaheim, Calif.

Over 60 Years' Experience in Solder and Flux Manufacturing

▲ For more details circle NED-1122 D on enclosed inquiry slip ▲

Increase Storage Capacity with a C-F LIFTER

Here's 1 man—a C-F Lifter and an electric hoist handling 5 ton packs of sheet steel with speed, safety and economy. One C-F Lifter handles a wide range of sizes . . . adjustments are made by the operator in a few seconds, permitting the Lifter to shift from wide to narrow sizes in a few seconds. Made in capacities from 2 to 60 tons.

Write for Bulletin SL-30 for specific examples of C-F Lifter operation and economy.

CULLEN-FRIESTEDT CO.
3304 South Kilbourn Avenue • Chicago 23, Illinois

▲ For more details circle NED-1123 D on enclosed inquiry slip ▲

Handiest TOOL IN THE PLANT!

CLEMENTS
Cadillac® BLOWER-SUCTION CLEANERS

Portable — versatile — economical. Simplest, quickest way to clean motors, machinery and other equipment. Pays for itself in any plant. Ask your dealer for a demonstration.

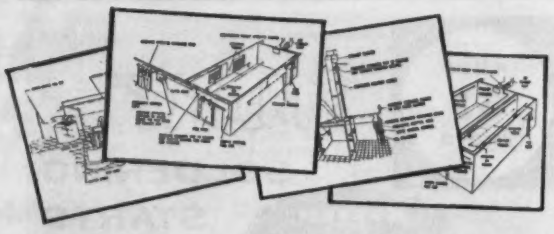
4 BLOWER-SUCTION MODELS
...including powerful Model HP with 2-speed motor for double duty. Easy starting at low speeds prevents blowing of fuses. All models available with attachments for handling many special tasks.

HANDLES 101 CLEANING JOBS
Blows dust, grit, chips and filings from hard-to-reach places. Use it as a suction cleaner for all kinds of jobs, or even to salvage bits of rare metal. Other models for annealing, soldering, and for preheating for bending.

BLOWER DIVISION | **CLEMENTS MFG. CO.**
6627 S. Narragansett Ave., Chicago 38, Ill.

SINCE 1910 Specialists in Quality Cleaning Equipment

▲ For more details circle NED-1124 D on enclosed inquiry slip ▲



Free! Tailor-made fire protection plans from Kidde!

Whatever the hazard—dip tanks, spray booths, electrical equipment, record vaults—Kidde has a plan that will illustrate the proper protection. These plans are yours free for the asking—just fill in the coupon below. If you wish, you may also request an on-the-spot analysis by a Kidde fire protection expert. No obligation, of course. Take advantage of Kidde's 35 years' experience. Mail the coupon today.

To: Walter Kidde & Company, Inc., 424 Main Street, Belleville 9, N. J.

Please send me free fire protection plans for the hazards checked:

☐ Spray booth ☐ Coaters ☐ Test stands
☐ Dip tank ☐ Record vaults ☐ Electrical equipment

(Mention any other special hazard)

☐ *Please have representative call*

NAME
COMPANY
ADDRESS
CITY STATE

▲ For more details circle NED-1125 D on enclosed inquiry slip ▲

New Literature & Catalogs

Timing Device Data

Dayton Co.—Timing devices and controls designed to provide the maximum number of timed circuits with the minimum number of components are shown in 4-page illustrated bulletin. Sequence timers, interval timers, and timed motor controls are engineered to the specific application.

▲ For more details circle NED-1126 D on enclosed inquiry slip ▲

Selecting Magnetic Pulleys

Dings Magnetic Separator Co.—Factors governing the selection of electromagnetic pulleys or nonelectric ceramic type Perma-Pulleys are evaluated in 8-page illustrated Catalog C-2000. Chart shows how to select the proper pulley of either type in relation to belt speed, belt width, and burden.

▲ For more details circle NED-1127 D on enclosed inquiry slip ▲

Cylinders, Boosters & Fittings

Flick-Reedy Corp., Miller Fluid Power & Tru-Seal Divisions — Detailed in illustrated 24-page Bulletin P2547P are air and hydraulic cylinders, nonsag piston rods, high speed cushions, adjustable stroke cylinders, air-hydraulic boosters, air-oil circuits, and Tru-Seal thread fittings. Mounting and dimensional data and thrust charts permit quick selection of bore sizes.

▲ For more details circle NED-1128 D on enclosed inquiry slip ▲

Air Conditioning & Drying Systems

Midland-Ross Corp., Surface Combustion Div.—Stopping condensation, speeding drying and other processing operations, obtaining subfreezing dewpoints, and making air sterile are uses for Model C Kathabar air conditioning and drying systems described in Bulletin K-160. Climate control rooms for product testing are also covered in the illustrated 16-page booklet.

▲ For more details circle NED-1129 D on enclosed inquiry slip ▲

Plant & Warehouse Trucks

Wilder Mfg. Co.—1960 catalog offers details on 27 standard style and 150 standard size platform, shelf, tray, rack, stake, bin, box, and table trucks for use in industrial plants, warehouses, offices, and many types of institutions. Specifications and illustrations are provided for each.

▲ For more details circle NED-1130 D on enclosed inquiry slip ▲

Maintenance Testing of Insulation Resistance

Associated Research, Inc.—Measurements of insulation resistance, as made with Vibrotest equipment, are diagrammed for motors, generators, transformers, and other electrical devices in 32-page Manual P14556. Step-by-step procedures for maintenance testing are included, along with a simple chart for keeping rcords.

▲ For more details circle NED-1131 D on enclosed inquiry slip ▲

Uses for Steel Castings

Steel Founders' Society of America—"Sinews of Modern Living" is title of booklet of 28 pages which presents a multitude of uses for steel castings. Line drawings of over 200 representative castings are included. Booklet illustrates the versatility, strength, engineering advantages, and economy of such castings in industrial applications.

▲ For more details circle NED-1132 D on enclosed inquiry slip ▲

Materials Storage Rack

Bernard Glockler North East Co.—Upright unit frames and stringers of RidgUrak storage rack systems are rapidly assembled without tools, bolts, or nuts. Described in an 8-page illustrated catalog, the racks for pallet, bar, bulk, drum, and other types of storage have connectors locked four ways. Included are loading tables for available sizes.

▲ For more details circle NED-1133 D on enclosed inquiry slip ▲

Close Tolerance Stampings

August W. Holmberg & Co.—Production of precision, close-tolerance stampings from the original tooling of the dies through to the final product is illustrated in 8-page booklet. Stampings are used in products ranging from transistors to razor blade dispensers. Automatic assembly applications are featured.

▲ For more details circle NED-1134 D on enclosed inquiry slip ▲

General Purpose Motors

General Electric Co.—Capacitor start, split phase, permanent split capacitor, shaded pole, and polyphase Form G fractional-horsepower, general purpose motors are subject of 12-page Bulletin GEA-6424A. Uses for 16 types range from machine tools to air conditioners in NEMA frame sizes 48 to 56.

▲ For more details circle NED-1135 D on enclosed inquiry slip ▲

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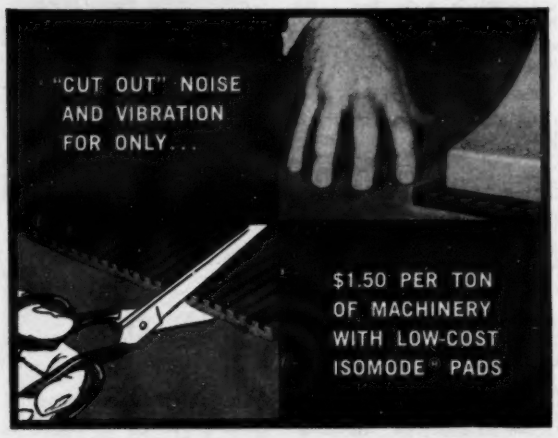

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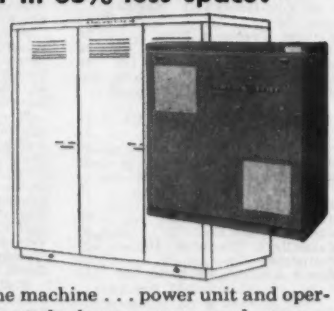

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244A1 CLEVELAND 17, OHIO
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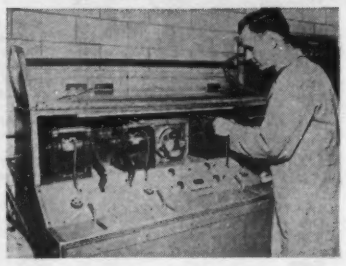
New Processes & Materials

MULTIPURPOSE LUBRICANT
resists severe climatic conditions



Developed to lubricate mobile equipment which must operate under adverse and extreme climatic conditions, Darina Grease AX is compounded with a new waterproof Microgel thickener. It is reported to withstand twice the length of wet conditions before failure in oscillating friction tests than other premium multipurpose greases. Under dry conditions, it was tested in excess of 2000 hr without failure. Other features include superior mechanical stability and corrosion protection. ● **Shell Oil Co.**, 50 W. 50th St., New York 20, N. Y.

▲ For more details circle NED-1141 D on enclosed inquiry slip ▲

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machining characteristics improved

Good machining qualities, plus a bright and clean surface, are afforded by improved Micro-Chip 2011-T3 alloy for screw machine use. Stock exhibits improved machining characteristics over conventional 2011-T3 alloy in more than 90 per cent of operations. Use of the stock makes possible smaller and finer chips, and can materially extend cutting tool life. Stock is color coded and chamfered at both ends. ● **Kaiser Aluminum & Chemical Corp.**, Kaiser Center, 300 Lakeside Dr., Oakland 12, Calif.

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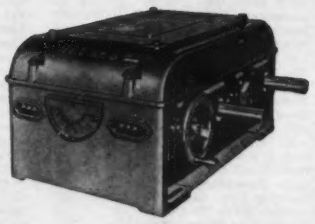
***Vari-Speed* TRANSMISSION**



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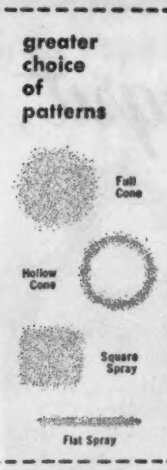

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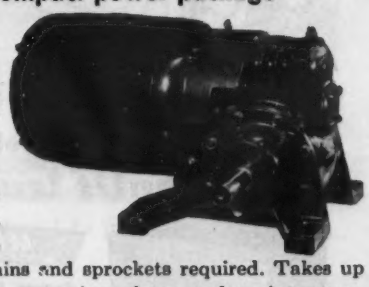

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▲ For more details circle **NED-1154 D** on enclosed inquiry slip ▲

Stearns ELECTRO-MAGNETIC DISC

FLOOR MOUNTED BRAKES

...quietly stop individual shafts or motors—fast

...and keep both feet on the ground!

- Over 40 sizes from 1 to 575 lb ft max. torque in 6 compact, standard styles.
- Drip-proof, or waterproof enclosures.
- Fast, positive actuation.
- Installation-proved dependability.
- Faster, easier installation — attach directly to shafts of double-end motors without couplings.
- AC or DC operation.
- Exclusive Stearns "Visi-wear-indicator". ✓ Fully assembled.

For Superior Performance . . . Specify Stearns!

Request Bulletins 226-D and 3502-D

Stearns ELECTRIC CORPORATION
120 NORTH BROADWAY
MILWAUKEE 2, WISCONSIN

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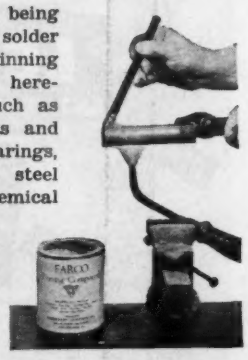
TINS ALL METALS



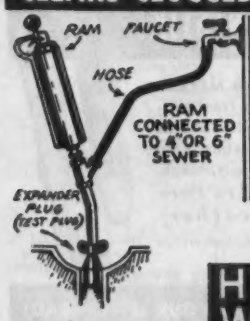
Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packed in 1½ lb. cans, price $3.00 f.o.b.

Have you tried #1 Acid Brushes, 25% more hair $3.50 per gross, f.o.b. Philadelphia. *Advt.*

FARRELLOY CO.
1246 North 26th St. Phila. 21, Pa.

▲ For more details circle NED-1156 D on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, vent or no vent! Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, plus set of 5 tapered adaptor plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!

HYDRAULIC MANUFACTURING CO.
214 INDUSTRIAL HEIGHTS KIEL, WISCONSIN

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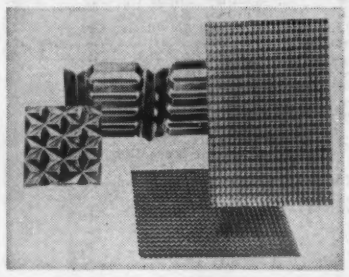
New Processes & Materials

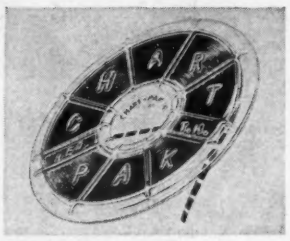
TEXTURED ALUMINUM SHEET in 4 patterns, 11 color finishes



Three-dimensional aluminum sheet in four patterns and eleven colorful Alumalure finishes is suited for use in room dividers, solar shades, ceiling panels, building facades, display backgrounds, signs, and handrail panels. Patterns are Egyptian with alternate raised and depressed pyramids; Baguette, a flat-top perforated design; Regent, a round perforation; and Offset, a large vented design. The 4 x 8-ft sheets are of a single standard alloy and temper. • **Aluminum Co. of America**, 733 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle NED-1158 D on enclosed inquiry slip ▲

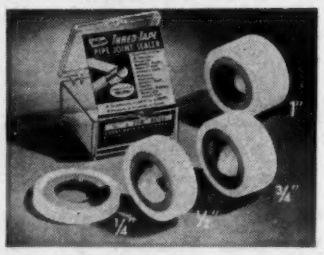
CHARTING TAPE offered in clear plastic dispenser



All Chart-Pak pressure-sensitive charting and drafting tapes from 1/64 to 2 in. wide are packaged in this clear plastic Tape-Saver dispenser reel. It protects tape against dust, dirt, and crushing and has a punched-out center for spindle storing. Sides of dispenser snap apart for removing or reloading tape, end of which is always accessible. • **Chart-Pak, Inc.**, 1 River Rd., Leeds, Mass.

▲ For more details circle NED-1159 D on enclosed inquiry slip ▲

PIPE JOINT SEALING TAPE in ¼, ½, ¾, and 1-in. widths



Thred-Tape pipe joint sealer is now offered in ¼, ½, ¾, and 1-in. widths which can be used for ½ to 4-in. pipe or over. The DuPont Teflon tape seals pipe handling acids, caustics, corrosives, biologicals, toxics, and gases, and can be used under high pressures, as well as temperatures from −250 to 500° F. It remains plastic for easy pipe disassembly. • **Crane Packing Co.**, Dept. ND-5, 6400 Oakton St., Morton Grove, Ill.

▲ For more details circle NED-1160 D on enclosed inquiry slip ▲

UNUSUAL BARGAINS

Check, Measure, Inspect with this 6 POWER POCKET COMPARATOR

(Complete with Leather Case)
MEASURES • Angles • Radii • Circles • Linear—in both decimal inches and millimeters.
Used to check layouts, machining on tools, dies, gauges; to check threads, chamfers, wear on cutting tools, etc.
Stock No. 30,061-AE . . Now Low Price $19.50 Pstpd.
Send Check or M.O.—or order on open account.

HANDY! FAST! ACCURATE!

STEREO-MICROSCOPE Terrific Buy! American Made!
Other American made Stereos cost $350.00 to $600.00 and more! Now—save well over 50%! Up to 3" Working Distance—Wide 3 Dimensional Field—Used in production, in research, or at home; for inspections, examinations, counting, checking, assembling. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 23 power and 40 power clear, sharp, erect image. Helical rack and pinion focusing. Interpupillary distance adjustable. SO GOOD, WE'LL SHIP ON 10-DAY FREE TRIAL. Stock No. 85,056-AE—full price, $99.50 f.o.b. Barrington, N. J.

LOW PRICED STOP WATCH FOR TIME STUDY, GENERAL USES
Has decimal timer so highly recommended for time study use. Seven jewels and unbreakable mainspring. Dial registers in 1/5th seconds. Dial is divided into 1/100ths of a minute for time study work. Chromium plated case.
Stock No. 30,371-AE.....$15.95 Postpaid (tax incl.)

INDUSTRIAL STETHOSCOPE DETECTS MOTOR FAULTS, LEAKS

A real stethoscope at half the usual cost! Ideal for industrial plants, machine shops, auto repair. Detects hard-to-hear machine and engine faults, leakage of gas, air or fluid. Lets you listen and diagnose like a doctor! Use to check on running machinery, loose joints, poor bearings and valves, strains, leaks in piping or pumps.
Stock No. 50,223-AE .....$2.95 postpaid
Stock No. 50,270-AE, DeLuxe Model $5.95 pstpd.
Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

FREE! Giant CATALOG of OPTICAL BUYS!

OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 128 pages—hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research lab, experimenters, hobbyists, math learning aids. No obligation. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., Barrington, N. J.

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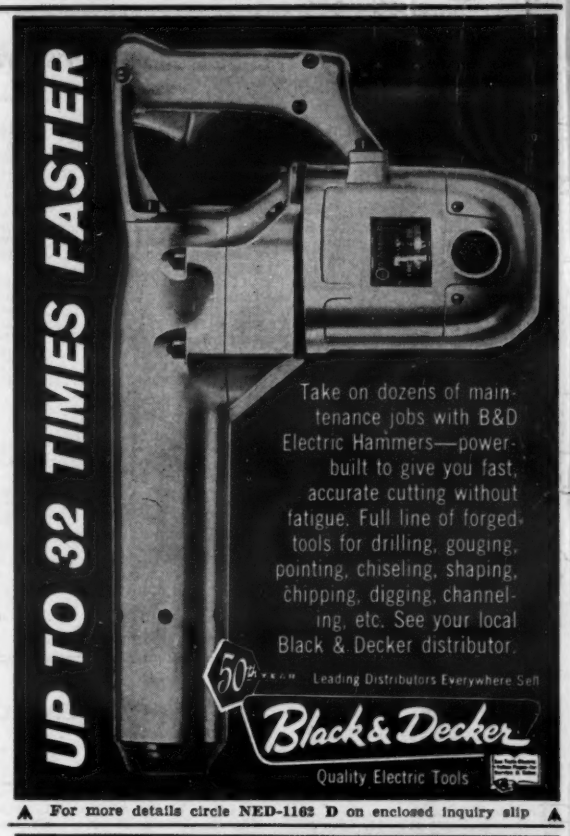

▲ For more details circle NED-1162 D on enclosed inquiry slip ▲

Magliner Mobile Loading Ramps

...WITH NON-SLIP GRATING SURFACE FOR SAFE, SURE, ALL-WEATHER OPERATIONS!

Never mind the weather . . . new Magliner Mobile Loading Ramps with slip-proof gratings give you positive power truck traction regardless of snow, sleet, rain, oil or grease build-up, etc. Fast, efficient ground-level loading all year 'round!

A loading dock on wheels, Magliner Loading Ramps are quickly, easily moved by one man, where and when they're needed. Made of light, strong magnesium, they're ruggedly built for long life service. Many standard models—capacities up to 16,000 lbs., more if you need it.

WRITE TODAY FOR COMPLETE DETAILS
Magline Inc. P. O. Box 164, Pinconning, Mich

MagLiner MAGNESIUM LOADING RAMPS

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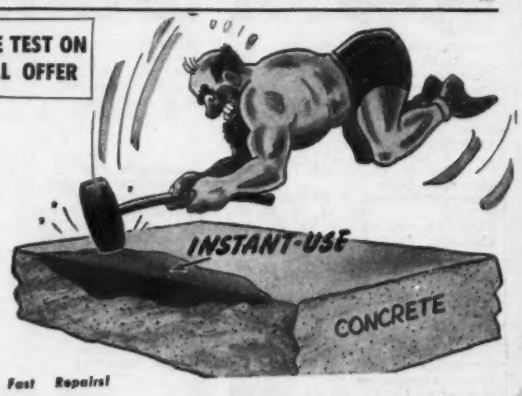
MAKE TEST ON TRIAL OFFER



Tough, Fast Repairs!

INSTANT SETTING FLOOR PATCH

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut—tamp smooth—truck over! No waiting! INSTANT-USE bonds tight to old concrete—right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment.

Get FREE Brochure and Trial Offer!

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and Free INSTANT-USE BROCHURE—no obligation. (Clip and attach Coupon to Co. letterhead.)

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